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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Navy

Justification Book Volume 1 of 1

Weapons Procurement, Navy

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The estimated cost for this report for the Department of Navy (DON) is \$31,566.

The estimated total cost for supporting the DON budget justification material is approximately \$1,142,960 for the 2017 fiscal year. This includes \$76,659 in supplies and \$1,066,301 in labor.

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Department of Defense Appropriations Act, 2018

Weapons Procurement, Navy

For construction, procurement, production, modification, and modernization of missiles, torpedoes, other weapons, and related support equipment including spare parts, and accessories therefore; 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, \$3,572,480,000 to remain available for obligation until September 30, 2020.

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Department of the Navy
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation -----	FY 2016 Base + OCO -----	FY 2017 PB Request with CR Adj Base -----	FY 2017 Total PB Requests* with CR Adj Base -----
Weapons Procurement, Navy	3,087,217	3,043,745	3,215,245
Total Department of the Navy	3,087,217	3,043,745	3,215,245

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Department of the Navy
 FY 2018 President's Budget Request
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 Total Obligational Authority
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Appropriation -----	FY 2017 PB Request with CR Adj OCO -----	FY 2017 Total PB Requests* with CR Adj OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj OCO -----
Weapons Procurement, Navy				
Total Department of the Navy				

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

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA -----	FY 2017 Total PB Requests* with CR Adj Base + OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj Base + OCO -----
Weapons Procurement, Navy	3,043,745	3,215,245		3,215,245
Total Department of the Navy	3,043,745	3,215,245		3,215,245

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Department of the Navy
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

Appropriation -----	FY 2018 Base -----	FY 2018 OCO -----	FY 2018 Total -----
Weapons Procurement, Navy	3,420,107	152,373	3,572,480
Total Department of the Navy	3,420,107	152,373	3,572,480

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Department of the Navy
 FY 2018 President's Budget Request
 Exhibit P-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2016 Base + OCO -----	FY 2017 PB Request with CR Adj Base -----	FY 2017 Total PB Requests* with CR Adj Base -----
01. Ballistic Missiles	1,095,812	1,109,862	1,109,862
02. Other Missiles	1,338,303	1,574,501	1,746,001
03. Torpedoes and Related Equipment	319,886	272,787	272,787
04. Other Weapons	183,161	189,729	189,729
06. Spares and Repair Parts	150,055	62,383	62,383
20. Undistributed		-165,517	-165,517
Total Weapons Procurement, Navy	3,087,217	3,043,745	3,215,245

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

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2017 PB Request with CR Adj OCO -----	FY 2017 Total PB Requests* with CR Adj OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj OCO -----
01. Ballistic Missiles				
02. Other Missiles	8,600	8,600		8,600
03. Torpedoes and Related Equipment				
04. Other Weapons				
06. Spares and Repair Parts				
20. Undistributed	-8,600	-8,600		-8,600
Total Weapons Procurement, Navy				

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

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA -----	FY 2017 Total PB Requests* with CR Adj Base + OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj Base + OCO -----
01. Ballistic Missiles	1,109,862	1,109,862		1,109,862
02. Other Missiles	1,583,101	1,754,601		1,754,601
03. Torpedoes and Related Equipment	272,787	272,787		272,787
04. Other Weapons	189,729	189,729		189,729
06. Spares and Repair Parts	62,383	62,383		62,383
20. Undistributed	-174,117	-174,117		-174,117
Total Weapons Procurement, Navy	3,043,745	3,215,245		3,215,245

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Total Obligational Authority
(Dollars in Thousands)

Appropriation: Weapons Procurement, Navy

Budget Activity -----	FY 2018 Base -----	FY 2018 OCO -----	FY 2018 Total -----
01. Ballistic Missiles	1,150,681		1,150,681
02. Other Missiles	1,601,372	150,873	1,752,245
03. Torpedoes and Related Equipment	293,953		293,953
04. Other Weapons	263,846	1,500	265,346
06. Spares and Repair Parts	110,255		110,255
20. Undistributed			
Total Weapons Procurement, Navy	3,420,107	152,373	3,572,480

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Department of the Navy
FY 2018 President's Budget Request
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Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2016 Base + OCO Quantity	Cost	FY 2017 PB Request with CR Adj Base Quantity	Cost	FY 2017 Total PB Requests* with CR Adj Base Quantity	Cost	S e c
----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Budget Activity 01: Ballistic Missiles									

Modification of Missiles									
1	Trident II Mods			1,089,064		1,103,086		1,103,086	U
Support Equipment & Facilities									
2	Missile Industrial Facilities	A		6,748		6,776		6,776	U
			-----		-----		-----		
Total Ballistic Missiles				1,095,812		1,109,862		1,109,862	
Budget Activity 02: Other Missiles									

Strategic Missiles									
3	Tomahawk	A	149	202,314	100	186,905	196	271,905	U
Tactical Missiles									
4	AMRAAM	A	158	202,773	163	204,697	163	204,697	U
5	Sidewinder	A	207	92,497	152	70,912	152	70,912	U
6	JSOW	B		12,919		2,232		2,232	U
7	Standard Missile	A	101	417,252	125	501,212	125	543,712	U
8	Small Diameter Bomb II								U
9	Ram	A	90	75,354	90	71,557	120	95,557	U
10	Joint Air Ground Missile (JAGM)	A			96	26,200	96	26,200	U
11	Hellfire	A							U
12	Laser Maverick	A					20,000		U

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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj OCO Quantity	Cost	FY 2017 Total PB Requests* with CR Adj OCO Quantity	Cost	FY 2017 Less Enacted Div B P.L.114-254** OCO Quantity	Cost	FY 2017 Remaining Req with CR Adj OCO Quantity	Cost	S e c
Budget Activity 01: Ballistic Missiles											
Modification of Missiles											
1	Trident II Mods										U
Support Equipment & Facilities											
2	Missile Industrial Facilities	A									U
Total Ballistic Missiles											
Budget Activity 02: Other Missiles											
Strategic Missiles											
3	Tomahawk	A									U
Tactical Missiles											
4	AMRAAM	A									U
5	Sidewinder	A									U
6	JSOW	B									U
7	Standard Missile	A									U
8	Small Diameter Bomb II										U
9	Ram	A									U
10	Joint Air Ground Missile (JAGM)	A									U
11	Hellfire	A	100	8,600	100	8,600			100	8,600	U
12	Laser Maverick	A									U

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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA Quantity	Cost	FY 2017 Total PB Requests* with CR Adj Base + OCO Quantity	Cost	FY 2017 Less Enacted Div B P.L.114-254** OCO Quantity	Cost	FY 2017 Remaining Req with CR Adj Base + OCO Quantity	Cost	S e c -
Budget Activity 01: Ballistic Missiles											
Modification of Missiles											
1	Trident II Mods		1,103,086		1,103,086				1,103,086		U
Support Equipment & Facilities											
2	Missile Industrial Facilities	A	6,776		6,776				6,776		U
Total Ballistic Missiles			1,109,862		1,109,862				1,109,862		
Budget Activity 02: Other Missiles											
Strategic Missiles											
3	Tomahawk	A	100	186,905	196	271,905			196	271,905	U
Tactical Missiles											
4	AMRAAM	A	163	204,697	163	204,697			163	204,697	U
5	Sidewinder	A	152	70,912	152	70,912			152	70,912	U
6	JSOW	B		2,232		2,232				2,232	U
7	Standard Missile	A	125	501,212	125	543,712			125	543,712	U
8	Small Diameter Bomb II										U
9	Ram	A	90	71,557	120	95,557			120	95,557	U
10	Joint Air Ground Missile (JAGM)	A	96	26,200	96	26,200			96	26,200	U
11	Hellfire	A	100	8,600	100	8,600			100	8,600	U
12	Laser Maverick	A				20,000			20,000		U

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(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018 Base Quantity	Cost	FY 2018 OCO Quantity	Cost	FY 2018 Total Quantity	Cost	S e c
Budget Activity 01: Ballistic Missiles									
Modification of Missiles									
1	Trident II Mods			1,143,595			1,143,595		U
Support Equipment & Facilities									
2	Missile Industrial Facilities	A		7,086			7,086		U
Total Ballistic Missiles				1,150,681			1,150,681		
Budget Activity 02: Other Missiles									
Strategic Missiles									
3	Tomahawk	A	34	134,375	66	100,086	100	234,461	U
Tactical Missiles									
4	AMRAAM	A	120	197,109			120	197,109	U
5	Sidewinder	A	185	79,692			185	79,692	U
6	JSOW	B		5,487				5,487	U
7	Standard Missile	A	117	510,875	8	35,208	125	546,083	U
8	Small Diameter Bomb II		90	20,968			90	20,968	U
9	Ram	A	60	58,587			60	58,587	U
10	Joint Air Ground Missile (JAGM)	A		3,789				3,789	U
11	Hellfire	A			110	8,771	110	8,771	U
12	Laser Maverick	A				5,040		5,040	U

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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2016 Base + OCO Quantity Cost	FY 2017 PB Request with CR Adj Base Quantity Cost	FY 2017 Total PB Requests* with CR Adj Base Quantity Cost	S e c
13	Stand off Precision Guided Munitions (SOPGM)	A	17 3,091	24 3,316	24 3,316	U
14	Aerial Targets	A	40,462	137,484	137,484	U
15	Other Missile Support	A	1,835	3,248	3,248	U
16	LRASM	A		10 29,643	10 29,643	U
Modification of Missiles						
17	ESSM	A	30 (37,671)	75 (107,397)	75 (107,397)	U
	Less: Advance Procurement (PY)			(-54,462)	(-54,462)	U
			----- 37,671	----- 52,935	----- 52,935	
18	ESSM					
	Advance Procurement (CY)		54,462			U
	C (FY 2016 for FY 2017) (M)		(54,462)			
19	Harpoon Mods	A				U
20	Harm Mods	A	120,798	178,213	178,213	U
21	Standard Missiles Mods	A		8,164	8,164	U
Support Equipment & Facilities						
22	Weapons Industrial Facilities	A	2,397	1,964	1,964	U
23	Fleet Satellite Comm Follow-On	A	35,961	36,723	36,723	U
24	DON PGM Transition Support***	A	4,075			U
Ordnance Support Equipment						
25	Ordnance Support Equipment	A	34,442	59,096	59,096	U
Total Other Missiles			----- 1,338,303	----- 1,574,501	----- 1,746,001	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj OCO Quantity	Cost	FY 2017 Total PB Requests* with CR Adj OCO Quantity	Cost	FY 2017 Less Enacted Div B P.L.114-254** OCO Quantity	Cost	FY 2017 Remaining Req with CR Adj OCO Quantity	Cost	S e c
13	Stand off Precision Guided Munitions (SOPGM)	A									U
14	Aerial Targets	A									U
15	Other Missile Support	A									U
16	LRASM	A									U
	Modification of Missiles										
17	ESSM	A									U
	Less: Advance Procurement (PY)										U
18	ESSM										
	Advance Procurement (CY)										U
	C (FY 2016 for FY 2017) (M)										
19	Harpoon Mods	A									U
20	Harm Mods	A									U
21	Standard Missiles Mods	A									U
	Support Equipment & Facilities										
22	Weapons Industrial Facilities	A									U
23	Fleet Satellite Comm Follow-On	A									U
24	DON PGM Transition Support***	A									U
	Ordnance Support Equipment										
25	Ordnance Support Equipment	A									U
	Total Other Missiles			8,600		8,600				8,600	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA Quantity	Cost	FY 2017 Total PB Requests* with CR Adj Base + OCO Quantity	Cost	FY 2017 Less Enacted Div B P.L.114-254** OCO Quantity	Cost	FY 2017 Remaining Req with CR Adj Base + OCO Quantity	Cost	S e c
13	Stand off Precision Guided Munitions (SOPGM)	A	24	3,316	24	3,316			24	3,316	U
14	Aerial Targets	A		137,484		137,484				137,484	U
15	Other Missile Support	A		3,248		3,248				3,248	U
16	LRASM	A	10	29,643	10	29,643			10	29,643	U
Modification of Missiles											
17	ESSM	A	75	(107,397)	75	(107,397)			75	(107,397)	U
	Less: Advance Procurement (PY)			(-54,462)		(-54,462)				(-54,462)	U
				52,935		52,935				52,935	
18	ESSM										U
	Advance Procurement (CY)										
	C (FY 2016 for FY 2017) (M)										
19	Harpoon Mods	A									U
20	Harm Mods	A		178,213		178,213				178,213	U
21	Standard Missiles Mods	A		8,164		8,164				8,164	U
Support Equipment & Facilities											
22	Weapons Industrial Facilities	A		1,964		1,964				1,964	U
23	Fleet Satellite Comm Follow-On	A		36,723		36,723				36,723	U
24	DON PGM Transition Support***	A									U
Ordnance Support Equipment											
25	Ordnance Support Equipment	A		59,096		59,096				59,096	U
Total Other Missiles				1,583,101		1,754,601				1,754,601	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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Department of the Navy
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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018 Base Quantity	FY 2018 Base Cost	FY 2018 OCO Quantity	FY 2018 OCO Cost	FY 2018 Total Quantity	FY 2018 Total Cost	Se
13	Stand off Precision Guided Munitions (SOPGM)	A	19	3,122			19	3,122	U
14	Aerial Targets	A		124,757				124,757	U
15	Other Missile Support	A		3,420				3,420	U
16	LRASM	A	25	74,733			25	74,733	U
Modification of Missiles									
17	ESSM	A	30	(74,524)	1	(1,768)	31	(76,292)	U
	Less: Advance Procurement (PY)								U
				74,524		1,768		76,292	
18	ESSM								U
	Advance Procurement (CY)								
	C (FY 2016 for FY 2017) (M)								
19	Harpoon Mods	A		17,300				17,300	U
20	Harm Mods	A		183,368				183,368	U
21	Standard Missiles Mods	A		11,729				11,729	U
Support Equipment & Facilities									
22	Weapons Industrial Facilities	A		4,021				4,021	U
23	Fleet Satellite Comm Follow-On	A		46,357				46,357	U
24	DON PGM Transition Support***	A							U
Ordnance Support Equipment									
25	Ordnance Support Equipment	A		47,159				47,159	U
Total Other Missiles				1,601,372		150,873		1,752,245	

***Funding in this line item was transferred during the year of execution from the Spectrum Relocation Fund (SRF) in support of the Advanced Wireless Services 3 (AWS-3) auction and is associated with the reallocation or sharing of the 1755-1780 MHz and 1695-1710 MHz bands. The SRF is administered by the Office of Management and Budget (OMB), which approves SRF transfers to federal agencies on an annual basis in consultation with the National Telecommunications and Information Administration (NTIA).

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Department of the Navy
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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2016 Base + OCO Quantity	Cost	FY 2017 PB Request with CR Adj Base Quantity	Cost	FY 2017 Total PB Requests* with CR Adj Base Quantity	Cost	S e c
----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Budget Activity 03: Torpedoes and Related Equipment									

Torpedoes and Related Equip									
26	SSTD	A		5,580		5,910		5,910	U
27	MK-48 Torpedo	A	8	60,438	11	44,537	11	44,537	U
28	ASW Targets	A		3,353		9,302		9,302	U
Mod of Torpedoes and Related Equip									
29	MK-54 Torpedo Mods	A		113,219		98,092		98,092	U
30	MK-48 Torpedo ADCAP Mods	A		56,730		46,139		46,139	U
31	Quickstrike Mine	B		10,754		1,236		1,236	U
Support Equipment									
32	Torpedo Support Equipment	A		62,771		60,061		60,061	U
33	ASW Range Support	A		3,699		3,706		3,706	U
Destination Transportation									
34	First Destination Transportation	A		3,342		3,804		3,804	U
			-----		-----		-----		
Total Torpedoes and Related Equipment				319,886		272,787		272,787	
Budget Activity 04: Other Weapons									

Guns and Gun Mounts									
35	Small Arms and Weapons	A		14,237		18,002		18,002	U

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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj OCO		FY 2017 Total PB Requests* with CR Adj OCO		FY 2017 Less Enacted Div B P.L.114-254** OCO		FY 2017 Remaining Req with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 03: Torpedoes and Related Equipment											
Torpedoes and Related Equip											
26	SSTD	A									U
27	MK-48 Torpedo	A									U
28	ASW Targets	A									U
Mod of Torpedoes and Related Equip											
29	MK-54 Torpedo Mods	A									U
30	MK-48 Torpedo ADCAP Mods	A									U
31	Quickstrike Mine	B									U
Support Equipment											
32	Torpedo Support Equipment	A									U
33	ASW Range Support	A									U
Destination Transportation											
34	First Destination Transportation	A									U
Total Torpedoes and Related Equipment											
Budget Activity 04: Other Weapons											
Guns and Gun Mounts											
35	Small Arms and Weapons	A									U

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Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA		FY 2017 Total PB Requests* with CR Adj Base + OCO		FY 2017 Less Enacted Div B P.L.114-254** OCO		FY 2017 Remaining Req with CR Adj Base + OCO		S e c
----	-----	-----	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	-
Budget Activity 03: Torpedoes and Related Equipment											

Torpedoes and Related Equip											
26	SSTD	A		5,910		5,910				5,910	U
27	MK-48 Torpedo	A	11	44,537	11	44,537			11	44,537	U
28	ASW Targets	A		9,302		9,302				9,302	U
Mod of Torpedoes and Related Equip											
29	MK-54 Torpedo Mods	A		98,092		98,092				98,092	U
30	MK-48 Torpedo ADCAP Mods	A		46,139		46,139				46,139	U
31	Quickstrike Mine	B		1,236		1,236				1,236	U
Support Equipment											
32	Torpedo Support Equipment	A		60,061		60,061				60,061	U
33	ASW Range Support	A		3,706		3,706				3,706	U
Destination Transportation											
34	First Destination Transportation	A		3,804		3,804				3,804	U
Total Torpedoes and Related Equipment				272,787		272,787				272,787	
Budget Activity 04: Other Weapons											

Guns and Gun Mounts											
35	Small Arms and Weapons	A		18,002		18,002				18,002	U

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Department of the Navy
FY 2018 President's Budget Request
Exhibit P-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018 Base Quantity	Cost	FY 2018 OCO Quantity	Cost	FY 2018 Total Quantity	Cost	S e c
----	-----	-----	-----	----	-----	----	-----	----	-
Budget Activity 03: Torpedoes and Related Equipment									

Torpedoes and Related Equip									
26	SSTD	A		5,240				5,240	U
27	MK-48 Torpedo	A	17	44,771			17	44,771	U
28	ASW Targets	A		12,399				12,399	U
Mod of Torpedoes and Related Equip									
29	MK-54 Torpedo Mods	A		104,044				104,044	U
30	MK-48 Torpedo ADCAP Mods	A		38,954				38,954	U
31	Quickstrike Mine	B		10,337				10,337	U
Support Equipment									
32	Torpedo Support Equipment	A		70,383				70,383	U
33	ASW Range Support	A		3,864				3,864	U
Destination Transportation									
34	First Destination Transportation	A		3,961				3,961	U
			-----		-----		-----		
Total Torpedoes and Related Equipment				293,953				293,953	
Budget Activity 04: Other Weapons									

Guns and Gun Mounts									
35	Small Arms and Weapons	A		11,332		1,500		12,832	U

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(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2016 Base + OCO Quantity Cost	FY 2017 PB Request with CR Adj Base Quantity Cost	FY 2017 Total PB Requests* with CR Adj Base Quantity Cost	S e c
----	-----	-----	-----	-----	-----	-----
	Modification of Guns and Gun Mounts					
36	CIWS Mods	A	54,656	50,900	50,900	U
37	Coast Guard Weapons	A	14,705	25,295	25,295	U
38	Gun Mount Mods	A	58,130	77,003	77,003	U
39	LCS Module Weapons	B		24 2,776	24 2,776	U
40	Cruiser Modernization Weapons	A	33,600			U
41	Airborne Mine Neutralization Systems	A	7,766	15,753	15,753	U
	Other					
42	Cancelled Account Adjustments	A	67			U
	Total Other Weapons		183,161	189,729	189,729	
	Budget Activity 06: Spares and Repair Parts					

	Spares and Repair Parts					
43	Spares and Repair Parts	A	150,055	62,383	62,383	U
	Total Spares and Repair Parts		150,055	62,383	62,383	
	Budget Activity 20: Undistributed					

	Undistributed					
44	Adj to Match Continuing Resolution	A		-165,517	-165,517	U
	Total Undistributed			-165,517	-165,517	
	Total Weapons Procurement, Navy		3,087,217	3,043,745	3,215,245	

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Department of the Navy
FY 2018 President's Budget Request
Exhibit P-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 PB Request with CR Adj OCO		FY 2017 Total PB Requests* with CR Adj OCO		FY 2017 Less Enacted Div B P.L.114-254** OCO		FY 2017 Remaining Req with CR Adj OCO		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
	Modification of Guns and Gun Mounts										
36	CIWS Mods	A									U
37	Coast Guard Weapons	A									U
38	Gun Mount Mods	A									U
39	LCS Module Weapons	B									U
40	Cruiser Modernization Weapons	A									U
41	Airborne Mine Neutralization Systems	A									U
	Other										
42	Cancelled Account Adjustments	A									U
	Total Other Weapons										
	Budget Activity 06: Spares and Repair Parts										
	Spares and Repair Parts										
43	Spares and Repair Parts	A									U
	Total Spares and Repair Parts										
	Budget Activity 20: Undistributed										
	Undistributed										
44	Adj to Match Continuing Resolution	A		-8,600		-8,600				-8,600	U
	Total Undistributed			-8,600		-8,600				-8,600	
	Total Weapons Procurement, Navy										

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Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA Quantity	Cost	FY 2017 Total PB Requests* with CR Adj Base + OCO Quantity	Cost	FY 2017 Less Enacted Div B P.L.114-254** OCO Quantity	Cost	FY 2017 Remaining Req with CR Adj Base + OCO Quantity	Cost	S e c
Modification of Guns and Gun Mounts											
36	CIWS Mods	A		50,900		50,900			50,900		U
37	Coast Guard Weapons	A		25,295		25,295			25,295		U
38	Gun Mount Mods	A		77,003		77,003			77,003		U
39	LCS Module Weapons	B	24	2,776	24	2,776			24	2,776	U
40	Cruiser Modernization Weapons	A									U
41	Airborne Mine Neutralization Systems	A		15,753		15,753			15,753		U
Other											
42	Cancelled Account Adjustments	A									U
Total Other Weapons				189,729		189,729			189,729		
Budget Activity 06: Spares and Repair Parts											
Spares and Repair Parts											
43	Spares and Repair Parts	A		62,383		62,383			62,383		U
Total Spares and Repair Parts				62,383		62,383			62,383		
Budget Activity 20: Undistributed											
Undistributed											
44	Adj to Match Continuing Resolution	A		-174,117		-174,117			-174,117		U
Total Undistributed				-174,117		-174,117			-174,117		
Total Weapons Procurement, Navy				3,043,745		3,215,245			3,215,245		

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Department of the Navy
FY 2018 President's Budget Request
Exhibit P-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

Appropriation: 1507N Weapons Procurement, Navy

Line No	Item Nomenclature	Ident Code	FY 2018 Base Quantity	Cost	FY 2018 OCO Quantity	Cost	FY 2018 Total Quantity	Cost	S e c
----	-----	-----	-----	----	-----	----	-----	----	-
	Modification of Guns and Gun Mounts								
36	CIWS Mods	A		72,698			72,698		U
37	Coast Guard Weapons	A		38,931			38,931		U
38	Gun Mount Mods	A		76,025			76,025		U
39	LCS Module Weapons	B	110	13,110			110	13,110	U
40	Cruiser Modernization Weapons	A		34,825			34,825		U
41	Airborne Mine Neutralization Systems	A		16,925			16,925		U
	Other								
42	Cancelled Account Adjustments	A							U
	Total Other Weapons			263,846		1,500		265,346	
	Budget Activity 06: Spares and Repair Parts								

	Spares and Repair Parts								
43	Spares and Repair Parts	A		110,255			110,255		U
	Total Spares and Repair Parts			110,255				110,255	
	Budget Activity 20: Undistributed								

	Undistributed								
44	Adj to Match Continuing Resolution	A							U
	Total Undistributed								
	Total Weapons Procurement, Navy			3,420,107		152,373		3,572,480	

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5	02	02	2209	Sidewinder.....	Volume 1 - 61
6	02	02	2230	JT Standoff Weapon (JSOW).....	Volume 1 - 73
7	02	02	2234	Standard Missile.....	Volume 1 - 75
8	02	02	2238	Small Diameter Bomb II (SDB II).....	Volume 1 - 87
9	02	02	2242	Rolling Airframe Missile (RAM).....	Volume 1 - 95
10	02	02	2248	Joint Air Ground Missile (JAGM).....	Volume 1 - 109

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14	02	02	2280	Aerial Targets.....	Volume 1 - 117
15	02	02	2290	Other Missile Support.....	Volume 1 - 139
16	02	02	2291	LRASM.....	Volume 1 - 141
17	02	03	2307	Evolved Sea Sparrow Missile (ESSM).....	Volume 1 - 149
18	02	03	2307	Evolved Sea Sparrow Missile (ESSM), Advance Procurement.....	Volume 1 - 161
19	02	03	2326	Harpoon Mods.....	Volume 1 - 165
20	02	03	2327	HARM Mods.....	Volume 1 - 167
21	02	03	2356	Standard Missiles Mods.....	Volume 1 - 173
22	02	04	2420	Weapons Industrial Facilities.....	Volume 1 - 175
23	02	04	2433	Fleet Satellite Comm Follow-On.....	Volume 1 - 177
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30	03	02	3225	MK-48 Torpedo ADCAP Mods.....	Volume 1 - 217
31	03	02	3231	Quickstrike Mine.....	Volume 1 - 231
32	03	03	3301	Torpedo Support Equipment.....	Volume 1 - 233
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39	04	02	4221	LCS Module Weapons.....	Volume 1 - 291
40	04	02	4223	Cruiser Modernization Weapons.....	Volume 1 - 293
41	04	02	4225	Airborne Mine Neutralization Systems.....	Volume 1 - 297

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Aerial Targets	2280	14	02	02.....	Volume 1 - 117
Airborne Mine Neutralization Systems	4225	41	04	02.....	Volume 1 - 297
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Coast Guard Weapons	4206	37	04	02.....	Volume 1 - 269
Cruiser Modernization Weapons	4223	40	04	02.....	Volume 1 - 293
Evolved Sea Sparrow Missile (ESSM)	2307	17	02	03.....	Volume 1 - 149
Evolved Sea Sparrow Missile (ESSM), Advance Procurement	2307	18	02	03.....	Volume 1 - 161
First Destination Transportation	2410	34	03	04.....	Volume 1 - 259
Fleet Satellite Comm Follow-On	2433	23	02	04.....	Volume 1 - 177
Gun Mount Mods	4217	38	04	02.....	Volume 1 - 281
HARM Mods	2327	20	02	03.....	Volume 1 - 167
Harpoon Mods	2326	19	02	03.....	Volume 1 - 165
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Laser Maverick	2255	12	02	02.....	Volume 1 - 113
MK-48 Torpedo	3117	27	03	01.....	Volume 1 - 187
MK-48 Torpedo ADCAP Mods	3225	30	03	02.....	Volume 1 - 217
MK-54 Torpedo Mods	3215	29	03	02.....	Volume 1 - 199
Missile Industrial Facilities	1350	2	01	03.....	Volume 1 - 33
Ordnance Support Equipment	2500	25	02	05.....	Volume 1 - 181
Other Missile Support	2290	15	02	02.....	Volume 1 - 139
Quickstrike Mine	3231	31	03	02.....	Volume 1 - 231
Rolling Airframe Missile (RAM)	2242	9	02	02.....	Volume 1 - 95
Sidewinder	2209	5	02	02.....	Volume 1 - 61
Small Arms and Weapons	4129	35	04	01.....	Volume 1 - 261
Small Diameter Bomb II (SDB II)	2238	8	02	02.....	Volume 1 - 87
Spares and Repair Parts	6120	43	06	01.....	Volume 1 - 299
Stand Off Precision Guided Munitions (SOPGM)	2264	13	02	02.....	Volume 1 - 115
Standard Missile	2234	7	02	02.....	Volume 1 - 75
Standard Missiles Mods	2356	21	02	03.....	Volume 1 - 173
Surface Ship Torpedo Def (SSTD)	3113	26	03	01.....	Volume 1 - 185

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8	02	02	2238	Small Diameter Bomb II (SDB II).....	Volume 1 - 87
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14	02	02	2280	Aerial Targets.....	Volume 1 - 117
15	02	02	2290	Other Missile Support.....	Volume 1 - 139
16	02	02	2291	LRASM.....	Volume 1 - 141
17	02	03	2307	Evolved Sea Sparrow Missile (ESSM).....	Volume 1 - 149
18	02	03	2307	Evolved Sea Sparrow Missile (ESSM), Advance Procurement.....	Volume 1 - 161
19	02	03	2326	Harpoon Mods.....	Volume 1 - 165
20	02	03	2327	HARM Mods.....	Volume 1 - 167
21	02	03	2356	Standard Missiles Mods.....	Volume 1 - 173
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30	03	02	3225	MK-48 Torpedo ADCAP Mods.....	Volume 1 - 217
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40	04	02	4223	Cruiser Modernization Weapons.....	Volume 1 - 293
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Coast Guard Weapons	4206	37	04	02.....	Volume 1 - 269
Cruiser Modernization Weapons	4223	40	04	02.....	Volume 1 - 293
Evolved Sea Sparrow Missile (ESSM)	2307	17	02	03.....	Volume 1 - 149
Evolved Sea Sparrow Missile (ESSM), Advance Procurement	2307	18	02	03.....	Volume 1 - 161
First Destination Transportation	2410	34	03	04.....	Volume 1 - 259
Fleet Satellite Comm Follow-On	2433	23	02	04.....	Volume 1 - 177
Gun Mount Mods	4217	38	04	02.....	Volume 1 - 281
HARM Mods	2327	20	02	03.....	Volume 1 - 167
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MK-48 Torpedo	3117	27	03	01.....	Volume 1 - 187
MK-48 Torpedo ADCAP Mods	3225	30	03	02.....	Volume 1 - 217
MK-54 Torpedo Mods	3215	29	03	02.....	Volume 1 - 199
Missile Industrial Facilities	1350	2	01	03.....	Volume 1 - 33
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Small Diameter Bomb II (SDB II)	2238	8	02	02.....	Volume 1 - 87
Spares and Repair Parts	6120	43	06	01.....	Volume 1 - 299
Stand Off Precision Guided Munitions (SOPGM)	2264	13	02	02.....	Volume 1 - 115
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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: 0603561N, 06030570N, 09012111N, 0101221N					
Line Item MDAP/MAIS Code: N/A													
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Cost (<i>\$ in Millions</i>)	12,327.155	1,089.064	1,103.086	1,143.595	0.000	1,143.595	1,110.469	1,210.406	1,253.015	1,247.250	4,009.553	24,493.593	
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Net Procurement (P-1) (<i>\$ in Millions</i>)	12,327.155	1,089.064	1,103.086	1,143.595	0.000	1,143.595	1,110.469	1,210.406	1,253.015	1,247.250	4,009.553	24,493.593	
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Total Obligation Authority (<i>\$ in Millions</i>)	12,327.155	1,089.064	1,103.086	1,143.595	0.000	1,143.595	1,110.469	1,210.406	1,253.015	1,247.250	4,009.553	24,493.593	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>													
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-	
Description:													
The TRIDENT II (D5) missiles will be carried on OHIO CLASS Fleet Ballistic Missile Submarines through 2042 and will be the initial payload for the Ohio Replacement Program (ORP). The D5 Life Extension (D5LE) program will ensure that the United States continues to maintain a highly survivable strategic deterrent well into the 21st century. The TRIDENT II missile (1) enhances fleet ballistic missile submarine survivability as it increases the sea launched ballistic missile range at full payload to exploit the total patrol area available to the TRIDENT submarine, (2) minimizes total weapon system costs as it has increased the sea launched ballistic missile payload to the level permitted by the size of the TRIDENT submarine launch tube, thereby allowing mission capability to be achieved with fewer submarines, and (3) has added an efficient hard target kill capability to the sea launched ballistic missiles.													
Major D5 Life Extension Costs Include:													
Production Support: Funding supports D5 Life Extension (D5LE) system integration, D5LE tooling and test equipment, D5LE Flight Test Instrumentation and Analysis, support for the new Test Missile Kits (TMK's), and D5LE end of production costs.													
Guidance Hardware: Includes procurement of subcomponents necessary for a complete Guidance System which consists of an Inertial Measurement Unit (IMU) and Electronics Assembly (EA). Within the IMU and EA there are numerous sub-components which are included in this cost element including Guidance Circuit Card Assemblies (CCA), Guidance Accelerometer Sensors (PIGA), Interferometric Fiber Optic Gyros (IFOG), Detector Package Assemblies (DPA) and Mk6 LE Electronic Part Sets (LEEP) and associated production support.													
Fleet Return Missile Electronic SPALT Kits: Includes procurement of the 4 Missile Electronics Packages and associated production support in order to extend the life of the D5 Missile to align with the Ohio Class life.													
Joint Fuze Sustainment: Includes the procurement of the Arming Fuzing & Firing (AF&F) kits.													
Major Operating and Support Costs Include:													
Support Costs: Funding supports the production of the W76-1/Mk4A Reentry Body assembly and associated support equipment including Reentry Body cabling and Reentry Body Shells, as well as production efforts for the Shape Stable Nose Tip (SSNT). Funding also supports the incremental replacement of aging Test/Evaluation equipment experiencing obsolescence as well as installation costs for missile SPALT's													

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles		P-1 Line Item Number / Title: 1250 / TRIDENT II Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0603561N, 06030570N, 09012111N, 0101221N
Line Item MDAP/MAIS Code: N/A		
including alterations to igniters, equipment sections, re-entry bodies and motor ancillary equipment. Also included in support cost funding is the system integration and planning, container procurement and EOP Missile and Guidance Costs. Solid Rocket Motor's and PBCS's: Includes procurement of Solid Rocket Motors (SRM's), Post Boost Control systems (PBCS's), and all associated costs including production requalification, HMX procurement, tooling, railcar support and Production Evaluation Testing and Static Firing. Strategic Arms Reduction Treaty (New START): Funding supports the nuclear arms reduction treaty (New START) between the United States and the Russian Federation which limits the number of deployed launchers.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy							Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 2: Modification of Missiles						P-1 Line Item Number / Title: 1250 / TRIDENT II Mods				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: 0603561N, 06030570N, 09012111N, 0101221N				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / TRIDENT II Mods - D5 Life Extension	P-5a, P-21		178	- / 8,612.337	- / 603.130	- / 614.046	- / 612.777	- / 0.000	- / 612.777
P-5	2 / TRIDENT II Mods -Operating and Support Costs	P-5a, P-21			- / 3,714.818	- / 485.934	- / 489.040	- / 530.818	- / 0.000	- / 530.818
P-40	Total Gross/Weapon System Cost				- / 12,327.155	- / 1,089.064	- / 1,103.086	- / 1,143.595	- / 0.000	- / 1,143.595
*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: Funding in the TRIDENT II Mods line is required to continue the procurement of TRIDENT II missiles and currently supports the life-extension of the D5 missile. The FY 2018 request of \$612.777 million for the D5 Life Extension (D5LE) Program, supports the redesign of the guidance system and missile electronics packages, which must be replaced to support the extended service life of the Ohio Class Submarines. FY 2018 funding procures missile electronic and guidance SPALT kits as well as other critical components required to support the extended SSBN hull life for a 14 SSBN TRIDENT II program. Increases from FY 2017 to FY 2018 include: - Increased QTY procurements of Guidance Electronic package subcomponents that are required to meet shipfill and STRATCOM requirements. - An increase in Joint Fuze Sustainment for production engineering support, full production of ASICS/HBT's/Igniters and Life of Part material buys such as thermal batteries, igniters, wafers and packaging material that are necessary to ensure the homogeneity of the parts for the entire population of AF&F's. Also, PPI/QE builds begin in preparation for the first production unit(FPU), scheduled for December 2019. The FY 2018 request of \$530.818 million for Operating and Support Costs funds efforts associated with the sustainment of TRIDENT II (D5) missiles to include system integration efforts, replacement of aging rocket motors, refreshes and replacement of D5 legacy tooling and test support equipment, Supportability Mods/Strategic Programs Alteration (SPALT) Insertion and modifications required for NEW START treaty obligations. Increases from FY 2017 to FY 2018 include: - Increased QTY procurements of Solid Rocket Motors (SRM's)and Post Boost Control Systems (PBCS's). An increase in QTY's in FY 2018 is required to address solid rocket motor age limitations. Solid rocket motors can safely be deployed to a maximum age of 30 years. Because rocket motors were originally procured at very high rates in the D5 program, a large quantity of rocket motors will all age out at the same time. The increased quantity of motor procurements ensures rocket motors will not exceed 30 years and that shipfill requirements will be met.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code: 178											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				8,612.337			603.130			614.046			612.777			0.000			612.777		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				8,612.337			603.130			614.046			612.777			0.000			612.777		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				8,612.337			603.130			614.046			612.777			0.000			612.777		
(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>				-			-			-			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)			
Flyaway - Missile End Cost																					
Recurring Cost																					
1.1.1) Airframe & Motor Flyaway Cost ^(†)	50,814.833	48	2,439.112	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.2) SPALT Kits ^(†)	3,585.075	106	380.018	3,341.000	2	6.682	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.3) Prior Year Procurement	-	-	-1,183.600	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Recurring Cost	-	-	1,635.530	-	-	6.682	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Flyaway - Missile End Cost	-	-	1,635.530	-	-	6.682	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Hardware - Missile Hardware Cost																					
Recurring Cost																					
2.1.1) Missile Hardware	-	-	1,549.266	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Recurring Cost	-	-	1,549.266	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Hardware - Missile Hardware Cost	-	-	1,549.266	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Hardware - Redesign Cost																					
Recurring Cost																					
3.1.1) Redesign	-	-	2,733.286	-	-	53.859	-	-	47.687	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Recurring Cost	-	-	2,733.286	-	-	53.859	-	-	47.687	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Hardware - Redesign Cost	-	-	2,733.286	-	-	53.859	-	-	47.687	-	-	0.000	-	-	0.000	-	-	0.000			
Hardware - Joint Fuze Sustainment Cost																					

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2						P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code: 178								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Recurring Cost																		
4.1.1) Joint Fuze Sustainment	-	-	4.000	-	-	20.975	-	-	23.100	-	-	41.254	-	-	0.000	-	-	41.254
Subtotal: Recurring Cost	-	-	4.000	-	-	20.975	-	-	23.100	-	-	41.254	-	-	0.000	-	-	41.254
Subtotal: Hardware - Joint Fuze Sustainment Cost	-	-	4.000	-	-	20.975	-	-	23.100	-	-	41.254	-	-	0.000	-	-	41.254
Hardware - Production Support Cost																		
Recurring Cost																		
5.1.1) Production Support	-	-	1,277.527	-	-	206.265	-	-	210.176	-	-	215.266	-	-	0.000	-	-	215.266
Subtotal: Recurring Cost	-	-	1,277.527	-	-	206.265	-	-	210.176	-	-	215.266	-	-	0.000	-	-	215.266
Subtotal: Hardware - Production Support Cost	-	-	1,277.527	-	-	206.265	-	-	210.176	-	-	215.266	-	-	0.000	-	-	215.266
Hardware - Guidance Hardware Cost																		
Recurring Cost																		
6.1.1) Circuit Card Assemblies (CCA's) ^(†)	1,517.056	213	323.133	1,629.235	51	83.091	1,660.184	49	81.349	1,591.000	55	87.505	-	-	0.000	1,591.000	55	87.505
6.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(†)	132.416	471	62.368	146.738	130	19.076	149.523	130	19.438	125.000	185	23.125	-	-	0.000	125.000	185	23.125
6.1.3) Detector Package Assembly (DPA)	220.000	868	190.960	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.4) MK6 LE Electronic Piece Parts (LEEP Set) ^(†)	994.101	554	550.732	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
6.1.5) Guidance Accelerometer Sensors (PIGA) ^(†)	223.765	425	95.100	256.792	125	32.099	261.664	125	32.708	240.000	180	43.200	-	-	0.000	240.000	180	43.200
6.1.6) Guidance Production Support	-	-	179.111	-	-	36.076	-	-	44.176	-	-	45.017	-	-	0.000	-	-	45.017
Subtotal: Recurring Cost	-	-	1,401.404	-	-	170.342	-	-	177.671	-	-	198.847	-	-	0.000	-	-	198.847
Subtotal: Hardware - Guidance Hardware Cost	-	-	1,401.404	-	-	170.342	-	-	177.671	-	-	198.847	-	-	0.000	-	-	198.847
Hardware - Fleet Return Missile Electronic SPALT Kits Cost																		
Recurring Cost																		
7.1.1) Flight Control Electronic Assembly (FCEA) ^(†)	-	-	0.000	607.394	33	20.044	618.925	40	24.757	630.700	40	25.228	-	-	0.000	630.700	40	25.228

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2						P-1 Line Item Number / Title: 1250 / TRIDENT II Mods							Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code: 178								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
7.1.2) Missile Inverter ^(†)	-	-	0.000	830.500	24	19.932	846.286	21	17.772	862.400	20	17.248	-	-	0.000	862.400	20	17.248
7.1.3) Command Sequencer ^(†)	-	-	0.000	656.833	24	15.764	669.316	19	12.717	682.000	19	12.958	-	-	0.000	682.000	19	12.958
7.1.4) Interlocks ^(†)	-	-	0.000	1,150.417	36	41.415	1,172.293	41	48.064	1,194.561	41	48.977	-	-	0.000	1,194.561	41	48.977
7.1.5) Missile Production Support	-	-	11.324	-	-	47.852	-	-	52.102	-	-	52.999	-	-	0.000	-	-	52.999
Subtotal: Recurring Cost	-	-	11.324	-	-	145.007	-	-	155.412	-	-	157.410	-	-	0.000	-	-	157.410
Subtotal: Hardware - Fleet Return Missile Electronic SPALT Kits Cost	-	-	11.324	-	-	145.007	-	-	155.412	-	-	157.410	-	-	0.000	-	-	157.410
Gross/Weapon System Cost	-	-	8,612.337	-	-	603.130	-	-	614.046	-	-	612.777	-	-	0.000	-	-	612.777

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2				P-1 Line Item Number / Title: 1250 / TRIDENT II Mods				Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension				
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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Airframe & Motor Flyaway Cost		2011	Lockheed Martin / Sunnyvale, CA	Various	SSP - Crystal City, VA	Dec 2010	Feb 2014	24	22,098.375	Y		
1.1.1) Airframe & Motor Flyaway Cost		2012	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Dec 2011	Feb 2015	24	22,150.583	Y		
1.1.2) SPALT Kits		2011	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Dec 2010	Feb 2014	12	6,460.330	Y		
1.1.2) SPALT Kits		2012	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Dec 2011	Feb 2015	24	3,221.710	Y		
1.1.2) SPALT Kits		2013	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Dec 2012	Feb 2016	24	3,193.080	Y		
1.1.2) SPALT Kits		2014	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2013	Feb 2017	24	3,180.880	Y		
1.1.2) SPALT Kits		2015	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2014	Feb 2018	22	3,281.727	Y		
1.1.2) SPALT Kits		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2019	2	3,341.000	Y		
6.1.1) Circuit Card Assemblies (CCA's) ^(†)		2015	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2015	Sep 2015	50	1,602.000	Y		
6.1.1) Circuit Card Assemblies (CCA's) ^(†)		2016	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2016	Sep 2016	51	1,629.235	Y		
6.1.1) Circuit Card Assemblies (CCA's) ^(†)		2017	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2017	Sep 2017	49	1,660.184	Y		
6.1.1) Circuit Card Assemblies (CCA's) ^(†)		2018	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2018	Sep 2018	55	1,591.000	Y		
6.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(†)		2015	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2015	Feb 2016	130	144.000	Y		
6.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(†)		2016	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2016	Feb 2017	130	146.738	Y		
6.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(†)		2017	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2017	Feb 2018	130	149.523	Y		
6.1.2) Interferometric Fiber-Optic Gyro (IFOG) ^(†)		2018	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2018	Feb 2019	185	125.000	Y		
6.1.4) MK6 LE Electronic Piece Parts (LEEP Set)		2015	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2015	Apr 2016	109	1,014.927	Y		
6.1.5) Guidance Accelerometer Sensors (PIGA) ^(†)		2015	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2015	Jun 2016	125	252.000	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2				P-1 Line Item Number / Title: 1250 / TRIDENT II Mods					Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension			
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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
6.1.5) Guidance Accelerometer Sensors (PIGA) ^(†)		2016	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2016	Jun 2017	125	256.792	Y		
6.1.5) Guidance Accelerometer Sensors (PIGA) ^(†)		2017	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2017	Jun 2018	125	261.664	Y		
6.1.5) Guidance Accelerometer Sensors (PIGA) ^(†)		2018	Charles Stark Draper Laboratory, INC / Cambridge MA	Various	SSP - Washington Navy Yard	Feb 2018	Jun 2019	180	240.000	Y		
7.1.1) Flight Control Electronic Assembly (FCEA) ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Nov 2017	33	607.394	Y		
7.1.1) Flight Control Electronic Assembly (FCEA) ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Nov 2018	40	618.925	Y		
7.1.1) Flight Control Electronic Assembly (FCEA) ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Nov 2019	40	630.700	Y		
7.1.2) Missile Inverter ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Jan 2018	24	830.500	Y		
7.1.2) Missile Inverter ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Jan 2019	21	846.286	Y		
7.1.2) Missile Inverter ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Jan 2020	20	862.400	Y		
7.1.3) Command Sequencer ^(†)		2016	LOCKHEED MARTIN / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2018	24	656.833	Y		
7.1.3) Command Sequencer ^(†)		2017	LOCKHEED MARTIN / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Feb 2019	19	669.316	Y		
7.1.3) Command Sequencer ^(†)		2018	LOCKHEED MARTIN / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Feb 2020	19	682.000	Y		
7.1.4) Interlocks ^(†)		2016	LOCKHEED MARTIN / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Nov 2017	36	1,150.417	Y		
7.1.4) Interlocks ^(†)		2017	LOCKHEED MARTIN / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Nov 2018	41	1,172.293	Y		
7.1.4) Interlocks ^(†)		2018	LOCKHEED MARTIN / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Nov 2019	41	1,194.561	Y		
(†) indicates the presence of a P-21												

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension													
Cost Elements (Units in Each)							Fiscal Year 2011										Fiscal Year 2012													B A L A N C E			
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2010	BAL DUE AS OF 1 OCT				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		
6.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 163																																	
	1	2015	NAVY	50	0	50																									50		
	1	2016	NAVY	51	0	51																									51		
	1	2017	NAVY	49	0	49																									49		
	1	2018	NAVY	55	0	55																									55		
6.1.2) Interferometric Fiber-Optic Gyro (IFOG)																																	
Prior Years Deliveries: 341																																	
	2	2015	NAVY	130	0	130																									130		
	2	2016	NAVY	130	0	130																									130		
	2	2017	NAVY	130	0	130																									130		
	2	2018	NAVY	185	0	185																									185		
6.1.5) Guidance Accelerometer Sensors (PIGA)																																	
Prior Years Deliveries: 300																																	
	3	2015	NAVY	125	0	125																									125		
	3	2016	NAVY	125	0	125																									125		
	3	2017	NAVY	125	0	125																									125		
	3	2018	NAVY	180	0	180																									180		
7.1.1) Flight Control Electronic Assembly (FCEA)																																	
	4	2016	NAVY	33	0	33																									33		
	4	2017	NAVY	40	0	40																									40		
	4	2018	NAVY	40	0	40																									40		
7.1.2) Missile Inverter																																	
	5	2016	NAVY	24	0	24																									24		
	5	2017	NAVY	21	0	21																									21		
	5	2018	NAVY	20	0	20																									20		
7.1.3) Command Sequencer																																	
	6	2016	NAVY	24	0	24																									24		
	6	2017	NAVY	19	0	19																									19		
	6	2018	NAVY	19	0	19																									19		
7.1.4) Interlocks																																	
	7	2016	NAVY	36	0	36																									36		
	7	2017	NAVY	41	0	41																									41		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy																		Date: May 2017																	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods																		Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension										
Cost Elements (Units in Each)							Fiscal Year 2011														Fiscal Year 2012														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2010	BAL DUE AS OF 1 OCT	Calendar Year 2011														Calendar Year 2012														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
	7	2018	NAVY	41	0	41																													41
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods													Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2013										Fiscal Year 2014														B A L A N C E			
O C C O	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				
6.1.1) Circuit Card Assemblies (CCA's)																																		
Prior Years Deliveries: 163																																		
	1	2015	NAVY		50	0	50																										50	
	1	2016	NAVY		51	0	51																										51	
	1	2017	NAVY		49	0	49																										49	
	1	2018	NAVY		55	0	55																										55	
6.1.2) Interferometric Fiber-Optic Gyro (IFOG)																																		
Prior Years Deliveries: 341																																		
	2	2015	NAVY		130	0	130																										130	
	2	2016	NAVY		130	0	130																										130	
	2	2017	NAVY		130	0	130																										130	
	2	2018	NAVY		185	0	185																										185	
6.1.5) Guidance Accelerometer Sensors (PIGA)																																		
Prior Years Deliveries: 300																																		
	3	2015	NAVY		125	0	125																										125	
	3	2016	NAVY		125	0	125																										125	
	3	2017	NAVY		125	0	125																										125	
	3	2018	NAVY		180	0	180																										180	
7.1.1) Flight Control Electronic Assembly (FCEA)																																		
	4	2016	NAVY		33	0	33																										33	
	4	2017	NAVY		40	0	40																										40	
	4	2018	NAVY		40	0	40																										40	
7.1.2) Missile Inverter																																		
	5	2016	NAVY		24	0	24																										24	
	5	2017	NAVY		21	0	21																										21	
	5	2018	NAVY		20	0	20																										20	
7.1.3) Command Sequencer																																		
	6	2016	NAVY		24	0	24																										24	
	6	2017	NAVY		19	0	19																										19	
	6	2018	NAVY		19	0	19																										19	
7.1.4) Interlocks																																		
	7	2016	NAVY		36	0	36																										36	
	7	2017	NAVY		41	0	41																										41	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: FY 2018 Navy																	Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods																	Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension									
Cost Elements (Units in Each)							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			
	7	2018	NAVY	41	0	41																											41
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017												
Appropriation / Budget Activity / Budget Sub Activity:									P-1 Line Item Number / Title:										Item Number / Title [DODIC]:												
1507N / 01 / 2									1250 / TRIDENT II Mods										1 / TRIDENT II Mods - D5 Life Extension												
Cost Elements (Units in Each)							Fiscal Year 2015										Fiscal Year 2016										B A L A N C E				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T 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
6.1.1) Circuit Card Assemblies (CCA's)																															
Prior Years Deliveries: 163																															
	1	2015	NAVY		50	0	50																							0	
	1	2016	NAVY		51	0	51																							46	
	1	2017	NAVY		49	0	49																							49	
	1	2018	NAVY		55	0	55																							55	
6.1.2) Interferometric Fiber-Optic Gyro (IFOG)																															
Prior Years Deliveries: 341																															
	2	2015	NAVY		130	0	130																							44	
	2	2016	NAVY		130	0	130																							130	
	2	2017	NAVY		130	0	130																							130	
	2	2018	NAVY		185	0	185																							185	
6.1.5) Guidance Accelerometer Sensors (PIGA)																															
Prior Years Deliveries: 300																															
	3	2015	NAVY		125	0	125																							85	
	3	2016	NAVY		125	0	125																							125	
	3	2017	NAVY		125	0	125																							125	
	3	2018	NAVY		180	0	180																							180	
7.1.1) Flight Control Electronic Assembly (FCEA)																															
	4	2016	NAVY		33	0	33																							33	
	4	2017	NAVY		40	0	40																							40	
	4	2018	NAVY		40	0	40																							40	
7.1.2) Missile Inverter																															
	5	2016	NAVY		24	0	24																							24	
	5	2017	NAVY		21	0	21																							21	
	5	2018	NAVY		20	0	20																							20	
7.1.3) Command Sequencer																															
	6	2016	NAVY		24	0	24																							24	
	6	2017	NAVY		19	0	19																							19	
	6	2018	NAVY		19	0	19																							19	
7.1.4) Interlocks																															
	7	2016	NAVY		36	0	36																							36	
	7	2017	NAVY		41	0	41																							41	
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods													Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension													
Cost Elements (Units in Each)							Fiscal Year 2015													Fiscal Year 2016													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015													Calendar Year 2016													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
	7	2018	NAVY	41	0	41																											41
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017										Fiscal Year 2018													B A L A N C E					
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 6	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				
6.1.1) Circuit Card Assemblies (CCA's)																																			
Prior Years Deliveries: 163																																			
	1	2015	NAVY		50	50	0																					0							
	1	2016	NAVY		51	5	46	5	5	4	4	4	4	4	4	4	4	4	4	4									0						
	1	2017	NAVY		49	0	49					A -	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	5	0					
	1	2018	NAVY		55	0	55														A -	-	-	-	-	-	-	-	5	50					
6.1.2) Interferometric Fiber-Optic Gyro (IFOG)																																			
Prior Years Deliveries: 341																																			
	2	2015	NAVY		130	86	44	11	11	11	11																0								
	2	2016	NAVY		130	0	130	-	-	-	-	10	10	11	11	11	11	11	11	11	11	11							0						
	2	2017	NAVY		130	0	130					A -	-	-	-	-	-	-	-	-	-	10	10	11	11	11	11	11	11	44					
	2	2018	NAVY		185	0	185														A -	-	-	-	-	-	-	-	-	-	-	-	-	185	
6.1.5) Guidance Accelerometer Sensors (PIGA)																																			
Prior Years Deliveries: 300																																			
	3	2015	NAVY		125	40	85	10	10	10	11	11	11	11	11													0							
	3	2016	NAVY		125	0	125	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	11	11	11	11	11				0				
	3	2017	NAVY		125	0	125					A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	85				
	3	2018	NAVY		180	0	180														A -	-	-	-	-	-	-	-	-	-	-	-	-	-	180
7.1.1) Flight Control Electronic Assembly (FCEA)																																			
	4	2016	NAVY		33	0	33	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	3	3	3	3	3	3	3	3	3				
	4	2017	NAVY		40	0	40		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40				
	4	2018	NAVY		40	0	40													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	40	
7.1.2) Missile Inverter																																			
	5	2016	NAVY		24	0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	6				
	5	2017	NAVY		21	0	21		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21				
	5	2018	NAVY		20	0	20													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20
7.1.3) Command Sequencer																																			
	6	2016	NAVY		24	0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	8				
	6	2017	NAVY		19	0	19		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19				
	6	2018	NAVY		19	0	19													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
7.1.4) Interlocks																																			
	7	2016	NAVY		36	0	36	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3				
	7	2017	NAVY		41	0	41		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41				
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: FY 2018 Navy																	Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods																	Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension									
Cost Elements (Units in Each)							Fiscal Year 2017													Fiscal Year 2018													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
	7	2018	NAVY	41	0	41														A -	-	-	-	-	-	-	-	-	-	-	-	-	41
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019										Fiscal Year 2020													B A L A N C E			
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 8	BAL D U E A S O F 1 O C T	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		
6.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 163																																	
	1	2015	NAVY		50	50	0																									0	
	1	2016	NAVY		51	51	0																									0	
	1	2017	NAVY		49	49	0																									0	
	1	2018	NAVY		55	5	50	5	5	5	5	5	4	4	4	4	4															0	
6.1.2) Interferometric Fiber-Optic Gyro (IFOG)																																	
Prior Years Deliveries: 341																																	
	2	2015	NAVY		130	130	0																									0	
	2	2016	NAVY		130	130	0																									0	
	2	2017	NAVY		130	86	44	11	11	11	11																				0		
	2	2018	NAVY		185	0	185	-	-	-	-	12	13	14	15	16	16	16	16	16	17	17	17								0		
6.1.5) Guidance Accelerometer Sensors (PIGA)																																	
Prior Years Deliveries: 300																																	
	3	2015	NAVY		125	125	0																									0	
	3	2016	NAVY		125	125	0																									0	
	3	2017	NAVY		125	40	85	10	10	10	11	11	11	11	11																	0	
	3	2018	NAVY		180	0	180	-	-	-	-	-	-	-	-	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0			
7.1.1) Flight Control Electronic Assembly (FCEA)																																	
	4	2016	NAVY		33	30	3	3																								0	
	4	2017	NAVY		40	0	40	-	3	3	3	3	3	3	3	3	3	4	4	4	4												0
	4	2018	NAVY		40	0	40	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4	3	3	3	3	3	3	3	3		
7.1.2) Missile Inverter																																	
	5	2016	NAVY		24	18	6	2	2	2																					0		
	5	2017	NAVY		21	0	21	-	-	-	2	2	2	2	2	2	2	2	2	1	1	1											0
	5	2018	NAVY		20	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	2	2	2	2	2	6	
7.1.3) Command Sequencer																																	
	6	2016	NAVY		24	16	8	2	2	2	2																				0		
	6	2017	NAVY		19	0	19	-	-	-	-	2	2	2	2	2	2	2	1	1	1	1	1									0	
	6	2018	NAVY		19	0	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	2	2	2	8		
7.1.4) Interlocks																																	
	7	2016	NAVY		36	33	3	3																							0		
	7	2017	NAVY		41	0	41	-	3	3	3	3	3	3	3	4	4	4	4	4												0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017												
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods												Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension												
Cost Elements (Units in Each)							Fiscal Year 2019												Fiscal Year 2020												BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
	7	2018	NAVY	41	0	41	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4	3	3	3	3	3	3	3	3	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension													
Cost Elements (Units in Each)							Fiscal Year 2021										Fiscal Year 2022													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 2 0	BAL DUE AS OF 1 OCT				Calendar Year 2021										Calendar Year 2022													
							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		
6.1.1) Circuit Card Assemblies (CCA's)																																	
Prior Years Deliveries: 163																																	
	1	2015	NAVY	50	50	0																									0		
	1	2016	NAVY	51	51	0																									0		
	1	2017	NAVY	49	49	0																									0		
	1	2018	NAVY	55	55	0																									0		
6.1.2) Interferometric Fiber-Optic Gyro (IFOG)																																	
Prior Years Deliveries: 341																																	
	2	2015	NAVY	130	130	0																									0		
	2	2016	NAVY	130	130	0																									0		
	2	2017	NAVY	130	130	0																									0		
	2	2018	NAVY	185	185	0																									0		
6.1.5) Guidance Accelerometer Sensors (PIGA)																																	
Prior Years Deliveries: 300																																	
	3	2015	NAVY	125	125	0																									0		
	3	2016	NAVY	125	125	0																									0		
	3	2017	NAVY	125	125	0																									0		
	3	2018	NAVY	180	180	0																									0		
7.1.1) Flight Control Electronic Assembly (FCEA)																																	
	4	2016	NAVY	33	33	0																									0		
	4	2017	NAVY	40	40	0																									0		
	4	2018	NAVY	40	37	3	3																								0		
7.1.2) Missile Inverter																																	
	5	2016	NAVY	24	24	0																									0		
	5	2017	NAVY	21	21	0																									0		
	5	2018	NAVY	20	14	6	2	2	2																						0		
7.1.3) Command Sequencer																																	
	6	2016	NAVY	24	24	0																									0		
	6	2017	NAVY	19	19	0																									0		
	6	2018	NAVY	19	11	8	2	2	2	2																					0		
7.1.4) Interlocks																																	
	7	2016	NAVY	36	36	0																									0		
	7	2017	NAVY	41	41	0																									0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods												Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension													
Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
	7	2018	NAVY	41	38	3	3																									0
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2				P-1 Line Item Number / Title: 1250 / TRIDENT II Mods				Item Number / Title [DODIC]: 1 / TRIDENT II Mods - D5 Life Extension			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	Charles Stark Draper Laboratory, INC - Cambridge MA	32	50	83	9	4	7	11	9	4	7	11
2	Charles Stark Draper Laboratory, INC - Cambridge MA	120	144	336	9	4	12	16	9	4	12	16
3	Charles Stark Draper Laboratory, INC - Cambridge MA	96	108	288	9	4	16	20	9	4	16	20
4	Lockheed Martin - Sunnyvale, CA	12	36	56	9	1	24	25	9	1	24	25
5	Lockheed Martin - Sunnyvale, CA	12	12	24	9	1	26	27	9	1	26	27
6	LOCKHEED MARTIN - Sunnyvale, CA	24	24	48	9	1	27	28	9	1	27	28
7	LOCKHEED MARTIN - Sunnyvale, CA	24	35	49	9	1	24	25	9	1	24	25

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2							P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				3,714.818			485.934			489.040			530.818			0.000			530.818		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				3,714.818			485.934			489.040			530.818			0.000			530.818		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				3,714.818			485.934			489.040			530.818			0.000			530.818		
(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>				-			-			-			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements		Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)		
Support - Support Cost																					
1.1) PIGA		-	-	99.452	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.2) SWFLANT Production Support		-	-	56.450	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.3) Warhead Components		-	-	1,256.684	-	-	81.225	-	-	79.443	-	-	81.352	-	-	0.000	-	-	81.352		
1.5) Tooling, Test/ Support Equipment		-	-	324.764	-	-	46.561	-	-	47.770	-	-	48.678	-	-	0.000	-	-	48.678		
1.6) Containers		-	-	2.833	-	-	0.600	-	-	0.142	-	-	0.100	-	-	0.000	-	-	0.100		
1.7) System Integration & Planning		-	-	151.577	-	-	15.198	-	-	15.487	-	-	16.022	-	-	0.000	-	-	16.022		
1.8) Supportability Mods/ SPALT Insertion		-	-	380.921	-	-	40.965	-	-	41.743	-	-	42.536	-	-	0.000	-	-	42.536		
1.9) Guidance Parts Procurement		-	-	57.123	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.10) SWFPAC Production Support		-	-	48.050	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.11) EOP Missile and Guidance Costs		-	-	24.264	-	-	3.585	-	-	3.955	-	-	4.030	-	-	0.000	-	-	4.030		
Subtotal: Support - Support Cost		-	-	2,402.118	-	-	188.134	-	-	188.540	-	-	192.718	-	-	0.000	-	-	192.718		
Support - Solid Rocket Motors and PBCS Cost																					
2.1) Solid Rocket Motor's ^(†)		16,066.750	52	835.471	16,366.750	12	196.401	16,677.750	12	200.133	16,994.571	14	237.924	-	-	0.000	16,994.571	14	237.924		

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2						P-1 Line Item Number / Title: 1250 / TRIDENT II Mods						Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
2.2) Post Boost Control System (PBCS) ^(†)	1,976.173	52	102.761	1,975.083	12	23.701	2,012.583	12	24.151	2,050.857	14	28.712	-	-	0.000	2,050.857	14	28.712
2.3) HMX	-	-	109.652	-	-	10.100	-	-	11.064	-	-	11.274	-	-	0.000	-	-	11.274
2.4) Other (Tooling, Storage, PET, Stat Fire etc.)	-	-	211.816	-	-	50.198	-	-	51.152	-	-	52.890	-	-	0.000	-	-	52.890
Subtotal: Support - Solid Rocket Motors and PBCS Cost	-	-	1,259.700	-	-	280.400	-	-	286.500	-	-	330.800	-	-	0.000	-	-	330.800
Support - New Start Cost																		
3.1) Aerospike Protective Cap	-	-	0.100	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.2) 3rd Stage Motor Support	-	-	0.000	-	-	0.000	-	-	3.200	-	-	0.000	-	-	0.000	-	-	0.000
3.3) Bare Missile Bridge	-	-	9.500	-	-	4.500	-	-	3.400	-	-	0.000	-	-	0.000	-	-	0.000
3.4) 1st and 2nd Stage Motor Chocks	-	-	16.100	-	-	5.400	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.5) Motor Chock Storage	-	-	11.100	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.6) 3rd Stage Dollies	-	-	2.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.7) Additional Movement/Transport/Storage/Equip	-	-	14.200	-	-	7.500	-	-	7.400	-	-	7.300	-	-	0.000	-	-	7.300
Subtotal: Support - New Start Cost	-	-	53.000	-	-	17.400	-	-	14.000	-	-	7.300	-	-	0.000	-	-	7.300
Gross/Weapon System Cost	-	-	3,714.818	-	-	485.934	-	-	489.040	-	-	530.818	-	-	0.000	-	-	530.818
^(†) indicates the presence of a P-5a																		

^(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2			P-1 Line Item Number / Title: 1250 / TRIDENT II Mods					Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs				
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>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
2.1) Solid Rocket Motor's ^(†)		2012	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Dec 2011	Feb 2015	12	0.000	Y		
2.1) Solid Rocket Motor's ^(†)		2013	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Dec 2012	Feb 2016	12	0.000	Y		
2.1) Solid Rocket Motor's ^(†)		2014	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2013	Feb 2017	12	0.000	Y		
2.1) Solid Rocket Motor's ^(†)		2015	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2014	Feb 2018	12	16,066.750	Y		
2.1) Solid Rocket Motor's ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2019	12	16,366.750	Y		
2.1) Solid Rocket Motor's ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Feb 2020	12	16,677.750	Y		
2.1) Solid Rocket Motor's ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Feb 2021	14	16,994.571	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2015	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2014	Feb 2018	12	1,976.167	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2016	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2015	Feb 2019	12	1,975.083	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2017	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2016	Feb 2020	12	2,012.583	Y		
2.2) Post Boost Control System (PBCS) ^(†)		2018	Lockheed Martin / Sunnyvale, CA	Various	SSP - Washington Navy Yard	Nov 2017	Feb 2021	14	2,050.857	Y		
^(†) indicates the presence of a P-21												

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs											
Cost Elements (Units in Each)							Fiscal Year 2012										Fiscal Year 2013														B A L A N C E
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	
2.1) Solid Rocket Motor's																															
Prior Years Deliveries: 4																															
	1	2012	NAVY	12	0	12				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	1	2013	NAVY	12	0	12														A -	-	-	-	-	-	-	-	-	-	-	12
	1	2014	NAVY	12	0	12																									12
	1	2015	NAVY	12	0	12																									12
	1	2016	NAVY	12	0	12																									12
	1	2017	NAVY	12	0	12																									12
	1	2018	NAVY	14	0	14																									14
2.2) Post Boost Control System (PBCS)																															
Prior Years Deliveries: 40																															
	2	2015	NAVY	12	0	12																									12
	2	2016	NAVY	12	0	12																									12
	2	2017	NAVY	12	0	12																									12
	2	2018	NAVY	14	0	14																									14
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: FY 2018 Navy																								Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods														Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs											
Cost Elements (Units in Each)							Fiscal Year 2014														Fiscal Year 2015														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014														Calendar Year 2015														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
2.1) Solid Rocket Motor's																																			
Prior Years Deliveries: 4																																			
	1	2012	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	4				
	1	2013	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12				
	1	2014	NAVY	12	0	12		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12				
	1	2015	NAVY	12	0	12															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	1	2016	NAVY	12	0	12																										12			
	1	2017	NAVY	12	0	12																										12			
	1	2018	NAVY	14	0	14																										14			
2.2) Post Boost Control System (PBCS)																																			
Prior Years Deliveries: 40																																			
	2	2015	NAVY	12	0	12															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	12
	2	2016	NAVY	12	0	12																										12			
	2	2017	NAVY	12	0	12																										12			
	2	2018	NAVY	14	0	14																										14			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs														
Cost Elements (Units in Each)							Fiscal Year 2016										Fiscal Year 2017														B A L A N C E			
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) Solid Rocket Motor's																																		
Prior Years Deliveries: 4																																		
	1	2012	NAVY	12	8	4	1	1	1	1																						0		
	1	2013	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1											0		
	1	2014	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	4		
	1	2015	NAVY	12	0	12	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12			
	1	2016	NAVY	12	0	12		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12			
	1	2017	NAVY	12	0	12														A -	-	-	-	-	-	-	-	-	-	-	12			
	1	2018	NAVY	14	0	14																									14			
2.2) Post Boost Control System (PBCS)																																		
Prior Years Deliveries: 40																																		
	2	2015	NAVY	12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12			
	2	2016	NAVY	12	0	12		A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12			
	2	2017	NAVY	12	0	12														A -	-	-	-	-	-	-	-	-	-	-	12			
	2	2018	NAVY	14	0	14																									14			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs													
Cost Elements (Units in Each)							Fiscal Year 2018										Fiscal Year 2019										BALANCE						
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018																Calendar Year 2019										
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP		
2.1) Solid Rocket Motor's																																	
Prior Years Deliveries: 4																																	
	1	2012	NAVY		12	12	0																										0
	1	2013	NAVY		12	12	0																										0
	1	2014	NAVY		12	8	4	1	1	1	1																				0		
	1	2015	NAVY		12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1											0	
	1	2016	NAVY		12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	4		
	1	2017	NAVY		12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12		
	1	2018	NAVY		14	0	14		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14		
2.2) Post Boost Control System (PBCS)																																	
Prior Years Deliveries: 40																																	
	2	2015	NAVY		12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1											0	
	2	2016	NAVY		12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	4		
	2	2017	NAVY		12	0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12		
	2	2018	NAVY		14	0	14		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14		
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017												
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs												
Cost Elements (Units in Each)							Fiscal Year 2020												Fiscal Year 2021												BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020												Calendar Year 2021													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
2.1) Solid Rocket Motor's																																
Prior Years Deliveries: 4																																
	1	2012	NAVY	12	12	0																										0
	1	2013	NAVY	12	12	0																										0
	1	2014	NAVY	12	12	0																										0
	1	2015	NAVY	12	12	0																										0
	1	2016	NAVY	12	8	4	1	1	1	1																			0			
	1	2017	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1											0
	1	2018	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	6		
2.2) Post Boost Control System (PBCS)																																
Prior Years Deliveries: 40																																
	2	2015	NAVY	12	12	0																										0
	2	2016	NAVY	12	8	4	1	1	1	1																						0
	2	2017	NAVY	12	0	12	-	-	-	-	1	1	1	1	1	1	1	1	1	1	1											0
	2	2018	NAVY	14	0	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	6		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2										P-1 Line Item Number / Title: 1250 / TRIDENT II Mods										Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs													
Cost Elements (Units in Each)							Fiscal Year 2022										Fiscal Year 2023													BALANCE			
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022										Calendar Year 2023																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP		
2.1) Solid Rocket Motor's																																	
Prior Years Deliveries: 4																																	
	1	2012	NAVY	12	12	0																											0
	1	2013	NAVY	12	12	0																											0
	1	2014	NAVY	12	12	0																											0
	1	2015	NAVY	12	12	0																											0
	1	2016	NAVY	12	12	0																											0
	1	2017	NAVY	12	12	0																											0
	1	2018	NAVY	14	8	6	1	1	2	2																						0	
2.2) Post Boost Control System (PBCS)																																	
Prior Years Deliveries: 40																																	
	2	2015	NAVY	12	12	0																											0
	2	2016	NAVY	12	12	0																											0
	2	2017	NAVY	12	12	0																											0
	2	2018	NAVY	14	8	6	1	1	2	2	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							0				

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Exhibit P-21, Production Schedule: FY 2018 Navy				Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 01 / 2			P-1 Line Item Number / Title: 1250 / TRIDENT II Mods				Item Number / Title [DODIC]: 2 / TRIDENT II Mods -Operating and Support Costs

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Lockheed Martin - Sunnyvale, CA	12	18	24	9	1	37	38	9	1	37	38
2	Lockheed Martin - Sunnyvale, CA	12	18	24	9	1	37	38	9	1	37	38

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 01: Ballistic Missiles / BSA 3: Support Equipment & Facilities							P-1 Line Item Number / Title: 1350 / Missile Industrial Facilities					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	18.472	6.748	6.776	7.086	0.000	7.086	7.067	7.215	7.364	7.512	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	18.472	6.748	6.776	7.086	0.000	7.086	7.067	7.215	7.364	7.512	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	18.472	6.748	6.776	7.086	0.000	7.086	7.067	7.215	7.364	7.512	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Funding for Missile Industrial Facilities provides for capital maintenance projects at Navy-owned Naval Industrial Reserve Ordnance Plants (NIROPS) at Sunnyvale and Santa Cruz, California, and Bacchus, Utah, in support of the Fleet Ballistic Missile program. The Bacchus, Utah, ATK facility alone consists of 583 acres, over 130 buildings and over 13 miles of road. The Sunnyvale, California facility consists of 49 acres of land and 10 buildings and the Santa Cruz, California facility consists of 271 acres of land and 29 buildings.												
Justification: As NIROP buildings are vital to D5 motor production, they must be maintained in an operational state until the D5 missile retirement. Most buildings are already over 50 years old and have exceeded their useful life. Safety related maintenance projects were originally deferred when the Department did not have a program of record to remotor the D5 missile to support its extended deployment. Subsequently, the Department approved and funded the re-motoring of D5 missiles. Additional repairs and upgrades are necessary to ensure NIROP buildings are properly maintained because of this significant extension of motor procurement. Incidents that stress the need for additional funds include: a leak in the fire branch line which left a few energetic buildings without fire protection, failure of an exhaust fan which halted operations until the unit was replaced, failure of a pneumatic valve which halted HMX production, and a failure in the liquid nitrogen pump system which shut down hardware testing. Projects planned in FY 2018 include modifications and rehabilitation of civil works, non-severable equipment, and real property. Among these projects are roof replacements, upgrades and replacements to boilers systems, fire system replacements, fencing replacements (focusing on Motor transportation routes), and general facilities maintenance.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 1: Strategic Missiles							P-1 Line Item Number / Title: 2101 / Tomahawk					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: 289												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	8,184	149	196	34	66	100	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	12,952.306	202.314	271.905	134.375	100.086	234.461	99.705	100.603	119.079	144.469	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	12,952.306	202.314	271.905	134.375	100.086	234.461	99.705	100.603	119.079	144.469	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	12,952.306	202.314	271.905	134.375	100.086	234.461	99.705	100.603	119.079	144.469	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	1,190.985	1,093.617	1,175.459	1,639.059	1,479.030	1,533.440	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Tomahawk provides an attack capability against fixed and mobile/moving targets, and can be launched from both surface ships (RGM) and submarines (UGM). Tomahawk consists of the following variants: (1) RGM/UGM-109C, Land Attack Conventional; (2) RGM/UGM-109D, Land Attack Submunition Dispenser; (3) RGM/UGM-109E, Tactical Tomahawk. The Block IV Tactical Tomahawk (TACTOM RGM/UGM-109E) preserves Tomahawk's long-range precision-strike capability while significantly increasing responsiveness and flexibility. TACTOM is capable of in-flight retargeting, the ability to loiter over the battlefield, in-flight missile health and status monitoring, and battle damage indication imagery, providing a digital look-down "snapshot" of the battlefield via a satellite data link. Other Tomahawk Weapon System functionality includes rapid mission planning and execution via Global Positioning System (GPS) onboard the launch platform and improved anti-jam GPS. The TACTOM service life is 30 years with a 15 year deployment and recertification cycle, based on the historical production schedule of the TACTOM recertification will commence in FY 2019. Characteristics and dimensions (approximate): Contractor: Raytheon Missiles Systems Company Weight (with booster and capsule) (UGM-109): 4,300 pounds Weight (with booster and canister) (RGM-109): 4,300 pounds Length (with booster): 20.5 feet Wing Span: 8.6 feet Cruise Speed: High Subsonic												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 1: Strategic Missiles						P-1 Line Item Number / Title: 2101 / Tomahawk				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 289										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Tomahawk	P-5a, P-21			8,184 / 12,952.306	149 / 202.314	196 / 271.905	34 / 90.645	66 / 100.086	100 / 190.731
P-3a	1 / TACTOM Modernization and Recertification Kits (Increase Capability and Maintain Reliability)				- / 0.000	- / 0.000	- / 0.000	- / 43.730	- / 0.000	- / 43.730
P-40	Total Gross/Weapon System Cost				8,184 / 12,952.306	149 / 202.314	196 / 271.905	34 / 134.375	66 / 100.086	100 / 234.461
*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: Due to the expenditure of missiles in support of Overseas Contingency Operations (OCO) in FY 2017, a limited procurement has been extended through FY 2018 to replenish the active inventory via OCO funds. Baseline funding is included within the budget request to achieve quantity cost savings when combined with the FY 2018 OCO procurement. The industrial base will be maintained to support production and unplanned maintenance through FY 2019. TACTOM missiles are scheduled to be returned to the depot starting in FY 2019 for planned depot maintenance (recertification) and inclusion of hardware and software of Anti-Access Area Denial (A2AD) Modernization kits. In addition to limited missile procurements, FY 2018 funding supports TACTOM Advanced Communications Architecture (ACA) kit procurement and associated support costs, production line shutdown, and support equipment. FY 2018 funding also supports the non-recurring engineering across the prime contractor and sub-tiered vendor base required for the standup of the Tactical Tomahawk recertification line. Efforts include tear down, replacement of obsolete components, replace components that are service life limited, recertify components, reassemble and test. This process will result in the validation and verification of the Tactical Tomahawk recertification line in preparation for induction of Fleet assets commencing in FY 2019. OCO: The FY 2018 Overseas Contingency Operations (OCO) funds are required to replenish 66 Tactical Tomahawk missiles, 5 of which were expended in October 2016 and 61 were expended in April 2017.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1						P-1 Line Item Number / Title: 2101 / Tomahawk						Item Number / Title [DODIC]: 1 / Tomahawk						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				8,184		149		196		34		66		100				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				12,952.306		202.314		271.905		90.645		100.086		190.731				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				12,952.306		202.314		271.905		90.645		100.086		190.731				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				12,952.306		202.314		271.905		90.645		100.086		190.731				
(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>				1,582.638		1,357.812		1,387.270		2,666.029		1,516.455		1,907.310				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Flyaway - TOTAL HARDWARE - MISSILE Cost																		
Recurring Cost																		
1.1.1) PREVIOUS TOMAHAWK PRODUCTION	1,335.961	4,200	5,611.035	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) REMANUFACTURE (BLOCK III)	-	-	592.217	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†) (1)	887.334	2,841	2,520.915	1,093.617	149	162.949	1,175.459	196	230.390	1,639.052	34	55.728	1,479.030	66	97.616	1,533.440	100	153.344
1.1.4) TACTICAL TOMAHAWK (CLS)	883.216	1,078	952.107	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.5) TACTICAL TOMAHAWK (TTL)	1,088.385	65	70.745	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	9,747.019	-	-	162.949	-	-	230.390	-	-	55.728	-	-	97.616	-	-	153.344
Subtotal: Flyaway - TOTAL HARDWARE - MISSILE Cost	-	-	9,747.019	-	-	162.949	-	-	230.390	-	-	55.728	-	-	97.616	-	-	153.344
Hardware - TOTAL HARDWARE - MISSILE - OTHER COSTS Cost																		
Recurring Cost																		
2.1.1) CCLS CAPSULE RETRO KIT	-	-	26.300	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1						P-1 Line Item Number / Title: 2101 / Tomahawk						Item Number / Title [DODIC]: 1 / Tomahawk						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
2.1.2) CCLS SUBMARINE CAPSULES	352.786	1,078	380.303	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.3) MK 14 CANISTERS ^(†) (2)	81.651	2,841	231.970	79.127	149	11.790	70.612	196	13.840	-	-	1.120	-	-	2.175	-	-	3.295
2.1.4) OBSOLESCENCE	-	-	45.405	-	-	3.550	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.6) PRODUCTION LINE SHUTDOWN ⁽³⁾	-	-	0.000	-	-	0.000	-	-	0.000	-	-	13.657	-	-	0.000	-	-	13.657
Subtotal: Recurring Cost	-	-	683.978	-	-	15.340	-	-	13.840	-	-	14.777	-	-	2.175	-	-	16.952
Subtotal: Hardware - TOTAL HARDWARE - MISSILE - OTHER COSTS Cost	-	-	683.978	-	-	15.340	-	-	13.840	-	-	14.777	-	-	2.175	-	-	16.952
Support - TOTAL PROCUREMENT SUPPORT - MISSILE Cost																		
3.1) PRODUCT IMPROVEMENT	-	-	435.331	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.2) PRODUCTION ENGINEERING SUPPORT ⁽⁴⁾	-	-	765.804	-	-	10.725	-	-	10.895	-	-	9.463	-	-	0.000	-	-	9.463
3.3) SPECIAL TOOLING & TEST EQUIPMENT (ST & TE)	-	-	38.090	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.4) SYSTEMS ENGINEERING ⁽⁵⁾	-	-	409.758	-	-	7.121	-	-	8.676	-	-	7.537	-	-	0.000	-	-	7.537
Subtotal: Support - TOTAL PROCUREMENT SUPPORT - MISSILE Cost	-	-	1,648.983	-	-	17.846	-	-	19.571	-	-	17.000	-	-	0.000	-	-	17.000
Support - TOTAL FLEET SUPPORT - MISSILE Cost																		
4.1) DOCUMENTATION	-	-	32.257	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.2) SUPPORT EQUIPMENT ⁽⁶⁾	-	-	183.554	-	-	6.179	-	-	8.104	-	-	3.140	-	-	0.295	-	-	3.435
4.3) THEATER MISSION PLANNING CENTER	-	-	255.044	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.4) TRAINING EQUIPMENT	-	-	87.953	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.1) EOQ	-	-	50.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
5.2) EOQ Credit	-	-	-50.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - TOTAL FLEET SUPPORT - MISSILE Cost	-	-	558.808	-	-	6.179	-	-	8.104	-	-	3.140	-	-	0.295	-	-	3.435

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1						P-1 Line Item Number / Title: 2101 / Tomahawk							Item Number / Title [DODIC]: 1 / Tomahawk					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Support - TOTAL SPARES & REPAIR PARTS Cost																		
6.1) TOMAHAWK INITIAL SPARES	-	-	313.518	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - TOTAL SPARES & REPAIR PARTS Cost	-	-	313.518	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost	1,582.638	8,184	12,952.306	1,357.812	149	202.314	1,387.270	196	271.905	2,666.029	34	90.645	1,516.455	66	100.086	1,907.310	100	190.731

(†) indicates the presence of a P-5a

Footnotes:

(1) FY 2018 baseline and OCO quantities will be negotiated and awarded on one production contract with a composite unit cost of \$1,533K and a total quantity of 100. The FY 2018 Overseas Contingency Operations (OCO) funds are required to replenish 66 Tactical Tomahawk missiles, five of which were expended in October 2016 and 61 were expended in April 2017. Baseline funding is included within the budget request to procure 34 missiles to achieve quantity cost savings when combined with the FY 2018 OCO procurement.

(2) In FY 2018, existing inventory of MK 14 canisters will be converted to the current configuration by Naval Munitions Command Weapons Station activities. As a result, new and remanufactured MK 14 canisters will not be procured in FY 2018, reducing the estimated unit cost.

(3) Production line shutdown costs include \$13.657M in FY 2018 for RMS and sub-tiered vendor smart shutdown. This value accounts for unique elements associated with the energetic and unique/proprietary electronic sub vendors in a long range missile system. The suspension of the Tomahawk line will include three primary RMS facilities at Camden, the Rita Rd production facility, and Integration and Test facility in Tucson, Arizona. It will include disposition of tooling at Raytheon Missile Systems, and multiple vendors including twelve primary vendors integral to the production of the TACTOM. Suspension efforts at these facilities will include elements of the smart suspension guidelines to document, archive, preserve, store TACTOM unique production process/test documentation, test equipment, tooling, support equipment, and address environmental issues mandatory for Tomahawk contractors to recertify missiles as the program transitions from the production to the depot phase.

(4) Production Engineering Support is required in FY 2018 to support the delivery of missiles across the funded delivery period. Efforts include warhead energetics, airframe engineering competencies, Production Acceptance Testing and integrated logistics support.

(5) Systems Engineering is required in FY 2018 to support the delivery of missiles across the funded delivery period. Efforts include warhead energetics, airframe engineering competencies, Production Acceptance Testing and integrated logistics support.

(6) Support Equipment in FY 2018 is associated with Mid-Body Range Safety System (MRSS) which is used within Tomahawk Flight Tests (TFTs) to control missile flight capabilities and fuel for production missiles. FY 2018 OCO Support Equipment is required to fuel the missiles procured in support of OCO operations.

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

Footnotes:

- (1) FY 2018 baseline and OCO quantities will be negotiated and awarded on one production contract with a composite unit cost of \$1,533K and a total quantity of 100. The FY 2018 Overseas Contingency Operations (OCO) funds are required to replenish 66 Tactical Tomahawk missiles, five of which were expended in October 2016 and 61 were expended in April 2017. Baseline funding is included within the budget request to procure 34 missiles to achieve quantity cost savings when combined with the FY 2018 OCO procurement.
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- (4) Production Engineering Support is required in FY 2018 to support the delivery of missiles across the funded delivery period. Efforts include warhead energetics, airframe engineering competencies, Production Acceptance Testing and integrated logistics support.
- (5) Systems Engineering is required in FY 2018 to support the delivery of missiles across the funded delivery period. Efforts include warhead energetics, airframe engineering competencies, Production Acceptance Testing and integrated logistics support.
- (6) Support Equipment in FY 2018 is associated with Mid-Body Range Safety System (MRSS) which is used within Tomahawk Flight Tests (TFTs) to control missile flight capabilities and fuel for production missiles. FY 2018 OCO Support Equipment is required to fuel the missiles procured in support of OCO operations.

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1				P-1 Line Item Number / Title: 2101 / Tomahawk				Item Number / Title [DODIC]: 1 / Tomahawk			

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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†)		2015	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Mar 2015	Sep 2016	214	1,121.669	Y		Apr 2013
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†)	✓	2015	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Dec 2016	Sep 2017	47	890.851	Y		Jul 2015
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†)		2016	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Dec 2016	Dec 2017	149	1,093.617	Y		Jul 2015
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†)		2017	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Jun 2017	Aug 2018	196	1,175.459	Y		Jul 2016
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†)		2018 ⁽⁷⁾	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	May 2018	Jul 2019	34	1,639.052	Y		Jul 2017
1.1.3) TACTICAL TOMAHAWK (VLS) ^(†)	✓	2018	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	May 2018	Jul 2019	66	1,479.030	Y		Jul 2017
2.1.3) MK 14 CANISTERS		2015	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Mar 2015	Feb 2016	214	73.000	Y		Jun 2012
2.1.3) MK 14 CANISTERS	✓	2015	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Mar 2016	Jan 2017	47	73.000	Y		Jun 2012
2.1.3) MK 14 CANISTERS		2016	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Mar 2016	Apr 2017	149	79.127	Y		Jun 2012
2.1.3) MK 14 CANISTERS		2017	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Mar 2017	Jan 2018	196	70.612	Y		Jul 2016

^(†) indicates the presence of a P-21

Footnotes:

⁽⁷⁾ FY 2018 baseline and OCO quantities will be negotiated and awarded on one production contract to achieve quantity cost savings with a composite unit cost of \$1,533K and total quantity of 100.

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1										P-1 Line Item Number / Title: 2101 / Tomahawk										Item Number / Title [DODIC]: 1 / Tomahawk													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2015										Fiscal Year 2016													B A L A N C E			
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		
1.1.3) TACTICAL TOMAHAWK (VLS) ⁽¹⁾																																	
Prior Years Deliveries: 2580																																	
	1	2015	NAVY		214	0	214						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	197
✓	1	2015	NAVY		47	0	47																										47
	1	2016	NAVY		149	0	149																										149
	1	2017	NAVY		196	0	196																										196
	1	2018	NAVY		34	0	34																										34
✓	1	2018	NAVY		66	0	66																										66
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1										P-1 Line Item Number / Title: 2101 / Tomahawk										Item Number / Title [DODIC]: 1 / Tomahawk												
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017										Fiscal Year 2018														BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017										Calendar Year 2018															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1.1.3) TACTICAL TOMAHAWK (VLS) ⁽¹⁾																																
Prior Years Deliveries: 2580																																
	1	2015	NAVY		214	17	197	17	18	18	18	18	18	18	18	18	18														0	
✓	1	2015	NAVY		47	0	47			A -	-	-	-	-	-	-	-	12	12	12	11										0	
	1	2016	NAVY		149	0	149			A -	-	-	-	-	-	-	-				2	14	14	14	14	13	13	13	13	13	26	
	1	2017	NAVY		196	0	196								A -	-	-	-	-	-	-	-	-	-	-	-	-	16	16	164		
	1	2018	NAVY		34	0	34																		A -	-	-	-	-	-	34	
✓	1	2018	NAVY		66	0	66																		A -	-	-	-	-	-	66	
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																									
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1										P-1 Line Item Number / Title: 2101 / Tomahawk										Item Number / Title [DODIC]: 1 / Tomahawk																									
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019										Fiscal Year 2020													BALANCE															
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019										Calendar Year 2020																												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP														
1.1.3) TACTICAL TOMAHAWK (VLS) ⁽¹⁾																																													
Prior Years Deliveries: 2580																																													
	1	2015	NAVY		214	214	0																												0										
✓	1	2015	NAVY		47	47	0																												0										
	1	2016	NAVY		149	123	26																												13	13	0								
	1	2017	NAVY		196	32	164																												16	17	17	16	16	16	17	17	15	17	0
	1	2018	NAVY		34	0	34																												-	-	-	-	-	-	-	-	3	3	3
✓	1	2018	NAVY		66	0	66	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	3	3	0																		
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP														

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1					P-1 Line Item Number / Title: 2101 / Tomahawk				Item Number / Title [DODIC]: 1 / Tomahawk			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 Missile System - Tucson, AZ	196	360	456	0	0	0	0	0	4	14	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).												

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Exhibit P-3a, Individual Modification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1			P-1 Line Item Number / Title: 2101 / Tomahawk		Modification Number / Title: 1 / TACTOM Modernization and Recertification Kits	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	0.000	0.000	0.000	43.730	0.000	43.730
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	0.000	0.000	0.000	43.730	0.000	43.730
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	0.000	0.000	0.000	43.730	0.000	43.730
<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: The Tactical Tomahawk (TACTOM) Advanced Communications Architecture (ACA) kits consist of the Integrated Single Box Solution (ISBS) radio, two new antennas and associated cabling, a new mid-body cover, and changes to the aft-body structure and aft-body cover. The ISBS radio is replacing the existing Satellite Data Link Terminal (SDLT) and the new Ultra High Frequency (UHF) antenna is replacing the existing UHF antenna. A second antenna is being added to the missile to accommodate a second frequency band. The changes to the missile are driven by the obsolescence of the SDLT hardware and the obsolescence of the UHF Demand Assigned Multiple Access (DAMA) communications infrastructure that is being phased out of service. An Engineering Change Proposal (ECP) will be developed in FY 2018 to implement the hardware and software changes to the missile. Tomahawk Weapon System Baseline IV, Operational Requirements Document (SN 641-76-04), Revision 3, 11 August 2004. Currently, all TACTOMs will be updated with the ACA hardware as part of recertification starting in FY 2019. Projected quantity over the life cycle is 3,036. Installations begin in FY 2019 The TACTOM service life for RGM109E and UGM109E Block IV Tomahawk cruise missiles is 30 years with a 15 year deployment and recertification cycle. According to the current Block IV AUR production schedule, recertification will begin in FY 2019. The TACTOM recertification includes FY 2018 funding associated with the non-recurring engineering across the prime contractor and sub-tiered vendor base required for the standup of the Tactical Tomahawk recertification line. Depot standup activities include the establishment and validation of the recertification line at Raytheon, as well as 12 sub-vendors. This will include updating, refurbishing, and replacing existing Tooling and Test Equipment which has been in existence from the early 1980s (Tomahawk Block II/III Depot and Production lines) along with the unique Tactical Tomahawk tooling and Test Equipment procured in FY 2003/2004. All hardware required to conduct the verification and validation process, which includes completion of work packages and conducting a First Article test, needs to be in place before commencing recertification in FY 2019. The yearly recertification profile will limit missile backlog within the Fleet due to the expiration of life limiting components. This activity includes the costs associated with the Raytheon labor, vendor recertification of specific components (i.e. mechanical and electrical components), recertification of the MK 45 submarine capsule, missile consumables, fuze recertification and fuel. Recertification is planned to occur concurrently with installation of Anti-Access Area Denial (A2AD) Modernization Kits, which will replace the existing SDLT radio and antenna.						

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Exhibit P-3a, Individual Modification: FY 2018 Navy						Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1			P-1 Line Item Number / Title: 2101 / Tomahawk			Modification Number / Title: 1 / TACTOM Modernization and Recertification Kits	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: TACTOM			Modification Type: Increase Capability and Maintain Reliability			Related RDT&E PEs: 0204229N	
Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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> TACTOM Modernization and Recertification Kits							
A Kits							
Recurring							
2.1.1) ACA kits - NonOrganic							
- / -							
- / -							
- / -							
91 / 15.761							
- / -							
- / 15.761							
- / -							
91 / 15.761							
- / -							
91 / 15.761							
Subtotal: TACTOM Modernization and Recertification Kits							
- / -							
- / -							
- / -							
- / 15.761							
- / -							
- / 15.761							
Subtotal: Procurement, All Modification Items							
- / 0.000							
- / -							
- / -							
- / -							
- / 15.761							
- / -							
- / 15.761							
Support (All Modification Items)							
3.1) Other Production Support- ACA Modification ⁽⁸⁾							
- / 0.000							
- / 0.000							
- / 0.000							
- / 0.176							
- / 0.000							
- / 0.176							
3.2) Support Equipment- ACA Modification ⁽⁹⁾							
- / 0.000							
- / 0.000							
- / 0.000							
- / 0.035							
- / 0.000							
- / 0.035							
3.3) Integrated Logistics Support- ACA Modification ⁽¹⁰⁾							
- / 0.000							
- / 0.000							
- / 0.000							
- / 0.024							
- / 0.000							
- / 0.024							
3.7) MK-45 Support- Recertification ⁽¹¹⁾							
- / 0.000							
- / 0.000							
- / 0.000							
- / 7.190							
- / 0.000							
- / 7.190							
3.8) Recertification Line Stand-Up ⁽¹²⁾							
- / 0.000							
- / 0.000							
- / 0.000							
- / 20.544							
- / 0.000							
- / 20.544							
Subtotal: Support							
- / 0.000							
- / -							
- / -							
- / 27.969							
- / -							
- / 27.969							
Installation							
<i>Modification Item 1 of 1:</i> TACTOM Modernization and Recertification Kits							
- / 0.000							
- / 0.000							
- / 0.000							
- / 0.000							
- / 0.000							
- / 0.000							
Subtotal: Installation							
- / 0.000							
- / -							
- / -							
- / -							
- / -							
- / -							
Total							
Total Cost (Procurement + Support + Installation)							
0.000							
0.000							
0.000							
43.730							
0.000							
43.730							

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Exhibit P-3a, Individual Modification: FY 2018 Navy						Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 1				P-1 Line Item Number / Title: 2101 / Tomahawk				Modification Number / Title: 1 / TACTOM Modernization and Recertification Kits					
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:							
Modification Item 1 of 1: TACTOM Modernization and Recertification Kits													
Manufacturer Information													
Manufacturer Name: RAYTHEON Company						Manufacturer Location: TUCSON, AZ							
Administrative Leadtime (in Months): 5						Production Leadtime (in Months): 12							
Dates		FY 2016				FY 2017				FY 2018			
Contract Dates										Mar 2018			
Delivery Dates										Mar 2019			
Installation Information													
Method of Implementation: Contractor:: Installation Name: ACA kits													
Installation Schedule													
	PYS	FY 2016				FY 2017				FY 2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-
Footnotes:													
(8) Unique Government and contractor production support and recurring fixed costs that is required per lot of ACA Modernization Kit. Funding reflects required obsolescence mitigation including avionics, electrical, and structures bill of material development, and obsolescence ECP forecasting in order to support the extended end of service date.													
(9) Includes unique support and test equipment required to support the integration of the ACA Modernization Kit during recertification. This would include planning, resourcing and implementing management actions to acquire and support the equipment required to sustain and validate the ACA capability/functionality ensuring that the TACTOM is available to the warfighter when it is needed.													
(10) Costs of support equipment management, computer resources support, training and training support, ILS program management, and packaging, handling, storage and transportation as associated with the ACA Modernization Kit.													
(11) Funds the MK-45 vendor base required to recertify and extend the service life of the CCLS barrels, retains the production line at Raytheon needed to assemble and breakdown the barrels, funds the vendor base required for the functionality of the MK-5 to include the gas generators and NSW Indian Head who produces the powder for the gas generator manufacturer.													
(12) FY 2018 Depot standup funding in the amount of \$20.544M is required for the prove in of the end-to-end recertification processes. The process takes five Block IV missiles through the entire recertification process. This is essential to qualifying test and tooling equipment, refining recertification processes and exercising quality/inspection procedures. All of which ensures that the end-to-end recertification line is ready for induction of missiles in FY 2019.													

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2206 / AMRAAM					
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: 185												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	2,313	158	163	120	-	120	257	270	297	289	594	4,461
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,141.223	202.773	204.697	197.109	0.000	197.109	284.679	288.445	299.484	302.831	644.555	4,565.796
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,141.223	202.773	204.697	197.109	0.000	197.109	284.679	288.445	299.484	302.831	644.555	4,565.796
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,141.223	202.773	204.697	197.109	0.000	197.109	284.679	288.445	299.484	302.831	644.555	4,565.796
<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>)	-	1.644	1.093	3.371	-	3.371	2.508	4.563	3.956	4.346	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Thousands</i>)	856.683	1,267.297	1,245.466	1,613.533	-	1,613.533	1,096.265	1,057.559	998.401	1,027.924	1,040.869	976.805
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Advanced Medium Range Air-to-Air Missile (AMRAAM) is the premier all-weather, all-environment radar guided missile developed jointly by the Air Force and Navy. The Air Force is the lead service. AMRAAM is a small, light, fast missile with improved capabilities against very low and high-altitude targets in an electronic attack (EA) environment. The AIM-120D provides increased performance from improved kinematics, GPS-aided navigation, a two-way data link; which enhances aircrew survivability and network compatibility, and new guidance software to combat a technologically capable adversary, reduce risk in air combat scenarios, and limit missile defense challenges.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2206 / AMRAAM				
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: 185										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / AMRAAM	P-5a, P-21			2,313 / 2,141.223	158 / 202.773	163 / 204.697	120 / 197.109	- / 0.000	120 / 197.109
P-40	Total Gross/Weapon System Cost				2,313 / 2,141.223	158 / 202.773	163 / 204.697	120 / 197.109	- / 0.000	120 / 197.109
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

Justification:

FY 2018 provides funding to procure 120 AIM-120D missiles to support warfighter requirements; as well as, required support costs such as: test and technical production support, procurement of training equipment, diminishing manufacturing sources, and test equipment/test equipment upgrades to support the AIM-120D configuration.

FY 2018 contains funding in Special Tooling and Test Equipment for an AMRAAM Guided Weapons Test Station (GWTS) to enable organic capability to perform basic AIM-120D repairs, telemetry (TM) kit installations, and Range Safety (RS) certification of test missiles. The GWTS will ensure organic capability for AMRAAM's life expectancy.

FY 2018 decrease in quantities is due to the first production lot of Form, Fit, Function Refresh (F3R) missiles, which replaces 80 percent of the missile guidance section components.

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2206 / AMRAAM						Item Number / Title [DODIC]: 1 / AMRAAM						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				2,313		158		163		120		-		120				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				2,141.223		202.773		204.697		197.109		0.000		197.109				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				2,141.223		202.773		204.697		197.109		0.000		197.109				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				2,141.223		202.773		204.697		197.109		0.000		197.109				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		1.644		1.093		3.371		-		3.371				
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>				925.734		1,283.373		1,255.810		1,642.575		-		1,642.575				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Flyaway - MISSILE Cost																		
Recurring Cost																		
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^{(†) (1)}	548.989	2,019	1,108.409	969.564	117	113.439	983.840	163	160.366	1,109.675	120	133.161	-	-	-	1,109.675	120	133.161
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM) ^{(†) (2)}	639.000	294	187.866	433.024	41	17.754	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) WARRANTY	-	-	30.817	-	-	5.303	-	-	-	-	-	-	-	-	-	-	-	-
1.1.4) DIMINISHING MANUFACTURING SOURCES (DMS) ⁽³⁾	-	-	131.884	-	-	44.500	-	-	29.747	-	-	35.049	-	-	-	-	-	35.049
1.1.5) TOOLING AND TEST EQUIPMENT ⁽⁴⁾	-	-	20.747	-	-	6.824	-	-	2.019	-	-	5.765	-	-	-	-	-	5.765
1.1.6) ENGINEERING CHANGE ORDERS (ECO) ⁽⁵⁾	-	-	30.693	-	-	1.682	-	-	1.269	-	-	0.870	-	-	-	-	-	0.870
Subtotal: Recurring Cost	-	-	1,510.416	-	-	189.502	-	-	193.401	-	-	174.845	-	-	-	-	-	174.845
Subtotal: Flyaway - MISSILE Cost	-	-	1,510.416	-	-	189.502	-	-	193.401	-	-	174.845	-	-	-	-	-	174.845
Flyaway - NONRECURRING and ANCILLARY EQUIPMENT Cost																		
Non Recurring Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy															Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2206 / AMRAAM							Item Number / Title [DODIC]: 1 / AMRAAM					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)	
2.1.1) SPECIAL TOOLING AND TEST EQUIPMENT ⁽⁶⁾	-	-	84.938	-	-	0.928	-	-	-	-	-	7.648	-	-	-	-	-	7.648	
2.1.2) CONTAINERS ⁽⁷⁾	-	-	5.204	-	-	-	-	-	-	-	-	2.000	-	-	-	-	-	2.000	
<i>Subtotal: Non Recurring Cost</i>	-	-	90.142	-	-	0.928	-	-	-	-	-	9.648	-	-	-	-	-	9.648	
<i>Subtotal: Flyaway - NONRECURRING and ANCILLARY EQUIPMENT Cost</i>	-	-	90.142	-	-	0.928	-	-	-	-	-	9.648	-	-	-	-	-	9.648	
Flyaway - PRODUCTION SUPPORT Cost																			
Recurring Cost																			
3.1.1) TEST SUPPORT	-	-	124.051	-	-	4.794	-	-	4.883	-	-	4.613	-	-	-	-	-	4.613	
3.1.2) TECHNICAL SUPPORT	-	-	256.899	-	-	5.009	-	-	4.727	-	-	4.518	-	-	-	-	-	4.518	
<i>Subtotal: Recurring Cost</i>	-	-	380.950	-	-	9.803	-	-	9.610	-	-	9.131	-	-	-	-	-	9.131	
<i>Subtotal: Flyaway - PRODUCTION SUPPORT Cost</i>	-	-	380.950	-	-	9.803	-	-	9.610	-	-	9.131	-	-	-	-	-	9.131	
Support - SUPPORT COST - FLEET Cost																			
4.1) PECULIAR SUPPORT EQUIPMENT	-	-	60.807	-	-	0.073	-	-	-	-	-	-	-	-	-	-	-	-	
4.2) TRAINING EQUIPMENT ⁽⁸⁾	-	-	22.899	-	-	0.888	-	-	0.077	-	-	1.870	-	-	-	-	-	1.870	
4.3) INTEGRATED LOGISTICS SUPPORT (ILS)	-	-	76.009	-	-	1.579	-	-	1.609	-	-	1.615	-	-	-	-	-	1.615	
<i>Subtotal: Support - SUPPORT COST - FLEET Cost</i>	-	-	159.715	-	-	2.540	-	-	1.686	-	-	3.485	-	-	-	-	-	3.485	
Gross/Weapon System Cost	925.734	2,313	2,141.223	1,283.373	158	202.773	1,255.810	163	204.697	1,642.575	120	197.109	-	-	0.000	1,642.575	120	197.109	
Remarks: The "To Complete" column reflects missile production through FY 2024. (t) indicates the presence of a P-5a																			

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2206 / AMRAAM	Item Number / Title [DODIC]: 1 / AMRAAM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Footnotes: (1) Unit cost calculations are based on combined procurement of Navy, AF and FMS buys for each fiscal year. As reflected in the P-21 exhibits, the total procured in FY 2017 is 642 and in FY 2018 is 570. The increase unit cost above inflation in FY 2018 is due to decreased quantity buy. (2) CNAF allocates CATMs to squadrons based on need and phase in the FRTP cycle. (3) FY 2018 DMS costs include obsolescence and loss of manufacturing sources for the Form, Fit, Function Refresh (F3R) program (13 Circuit Card Assemblies (CCA)) to mitigate obsolescence in the guidance section which will enable single integration, and consolidated qualification and flight testing along with the Central Processing Unit (CPU) Spike Extension Program (1 CCA). The costs are prorated among Navy, AF, and FMS. The increase cost above inflation in FY 2018 is due to cost associated with design, developing and testing the F3R replacement components. (4) The increase in cost above inflation in FY 2018 is to procure unique tooling and test equipment required to incorporate redesigned F3R replacement components into the production line. (5) Engineering Change Orders line provides funding to test and qualify class I engineering change proposals by the prime vendor into missile production. Fluctuations correspond directly with total cost of hardware procured. (6) FY 2018 Special Tooling and Test Equipment (ST/TE) is procured equipment required to organically test missiles and perform telemetry (TM) kit installation. (7) Containers are required to maintain pace with quantities, ensure the updated in-container reprogramming capability continues and replace outdated/damaged containers. The containers are typically funded every four years based on procurement quantities. (8) Training equipment request includes funding for Non-Developmental Item-Airborne Interface Units (NDI-AIUs) used to gather missile performance data for in production missiles for product improvement within the current performance envelope. The increase in cost above inflation in FY 2018 is to procure NDI-AIU's that incorporate redesigned F3R replacement components into system flight safety evaluation.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2			P-1 Line Item Number / Title: 2206 / AMRAAM					Item Number / Title [DODIC]: 1 / AMRAAM				
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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2014 ⁽⁹⁾	Raytheon Missile System / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Mar 2015	Sep 2017	7	913.143	Y		Mar 2013
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2016	Raytheon Missile System / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Mar 2016	Sep 2018	117	969.564	Y		Jul 2013
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2017	Raytheon Missile System / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Sep 2017	Nov 2019	163	983.840	Y		Jul 2015
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ^(†)		2018	Raytheon Missile System / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Mar 2018	Apr 2020	120	1,109.675	Y		Jul 2015
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM)		2014 ⁽¹⁰⁾	Raytheon Missile System / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Dec 2014	Sep 2016	54	595.567	Y		Jul 2013
1.1.2) AIM-120 MISSILE - CAPTIVE AIR TRAINING MISSILE (CATM)		2016 ⁽¹¹⁾	Raytheon Missile System / Tucson, AZ	SS / FPIF	EGLIN AFB, FL	Mar 2016	Jun 2018	41	433.024	Y		Aug 2013

^(†) indicates the presence of a P-21

Footnotes:

⁽⁹⁾ FY 2014 & FY 2016 AUR deliveries have been delayed due to rebaselining to a quarterly vice a monthly schedule and adjust for overall production capacity.

⁽¹⁰⁾ FY 2014 & FY 2016 CATM deliveries have been delayed due to rebaselining to a quarterly vice a monthly schedule and adjust for overall production capacity.

⁽¹¹⁾ The procurement lead time has increased by 6 months to allow vendor additional time to obtain long lead items required for production.

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2206 / AMRAAM													Item Number / Title [DODIC]: 1 / AMRAAM													
Cost Elements (Units in Each)							Fiscal Year 2015													Fiscal Year 2016													B A L A N C E			
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 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						
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																				
Prior Years Deliveries: 2012																																				
	1	2014	NAVY	7	0	7				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7					
	1	2014	AF ^(‡)	190	0	190				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190					
	1	2014	FMS ^(‡)	200	0	200				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200					
	1	2014	Total	397	0	397				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	397					
	1	2016	NAVY	117	0	117														A -	-	-	-	-	-	-	-	-	-	-	-	-	117			
	1	2016	AF ^(‡)	281	0	281														A -	-	-	-	-	-	-	-	-	-	-	-	-	281			
	1	2016	FMS ^(‡)	314	0	314														A -	-	-	-	-	-	-	-	-	-	-	-	-	314			
	1	2016	Total	712	0	712														-	-	-	-	-	-	-	-	-	-	-	-	-	712			
	1	2017	NAVY	163	0	163																											163			
	1	2017	AF ^(‡)	235	0	235																											235			
	1	2017	FMS ^(‡)	244	0	244																											244			
	1	2017	Total	642	0	642																											642			
	1	2018	NAVY	120	0	120																											120			
	1	2018	AF ^(‡)	205	0	205																											205			
	1	2018	FMS ^(‡)	245	0	245																											245			
	1	2018	Total	570	0	570																											570			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2206 / AMRAAM													Item Number / Title [DODIC]: 1 / AMRAAM													
Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018													BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT				Calendar Year 2017												Calendar Year 2018														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																				
Prior Years Deliveries: 2012																																				
	1	2014	NAVY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2014	AF ^(‡)	190	0	190	-	-	-	-	-	-	-	-	-	-	-	15	15	16	16	16	16	16	16	16	16	16	16	16	-	0				
	1	2014	FMS ^(‡)	200	0	200	-	-	-	-	-	-	-	-	-	-	-	16	16	16	16	17	17	17	17	17	17	17	17	17	-	0				
	1	2014	Total	397	0	397	-	-	-	-	-	-	-	-	-	-	-	38	31	32	32	33	33	33	33	33	33	33	33	33	-	0				
	1	2016	NAVY	117	0	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40	77				
	1	2016	AF ^(‡)	281	0	281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	258				
	1	2016	FMS ^(‡)	314	0	314	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	288				
	1	2016	Total	712	0	712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	89	623				
	1	2017	NAVY	163	0	163												A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	163			
	1	2017	AF ^(‡)	235	0	235												A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	235		
	1	2017	FMS ^(‡)	244	0	244												A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	244		
	1	2017	Total	642	0	642												-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	642	
	1	2018	NAVY	120	0	120																	A -	-	-	-	-	-	-	-	-	-	-	-	120	
	1	2018	AF ^(‡)	205	0	205																	A -	-	-	-	-	-	-	-	-	-	-	-	205	
	1	2018	FMS ^(‡)	245	0	245																	A -	-	-	-	-	-	-	-	-	-	-	-	245	
	1	2018	Total	570	0	570																	-	-	-	-	-	-	-	-	-	-	-	-	-	570
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2206 / AMRAAM										Item Number / Title [DODIC]: 1 / AMRAAM													
Cost Elements (Units in Each)							Fiscal Year 2019										Fiscal Year 2020										BALANCE						
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019										Calendar Year 2020																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP		
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																	
Prior Years Deliveries: 2012																																	
	1	2014	NAVY		7	7	0																										0
	1	2014	AF ^(‡)		190	190	0																										0
	1	2014	FMS ^(‡)		200	200	0																										0
	1	2014	Total		397	397	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2016	NAVY		117	40	77	-	-	40	-	-	37	-	-	-	-											0					
	1	2016	AF ^(‡)		281	23	258	23	23	23	23	23	24	24	24	24	24											0					
	1	2016	FMS ^(‡)		314	26	288	26	26	26	26	26	26	26	26	27	27											0					
	1	2016	Total		712	89	623	49	49	89	49	49	86	50	50	50	51	51	-	-	-	-	-	-	-	-	-	-	-	-	0		
	1	2017	NAVY		163	0	163	-	-	-	-	-	-	-	-	-	-	-	-	13	13	13	13	13	14	14	14	14	14	14	14		
	1	2017	AF ^(‡)		235	0	235	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	19	19	19	19	19		
	1	2017	FMS ^(‡)		244	0	244	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	21	21	21	21		
	1	2017	Total		642	0	642	-	-	-	-	-	-	-	-	-	-	-	-	53	53	53	53	53	54	54	53	54	54	54	54		
	1	2018	NAVY		120	0	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	60		
	1	2018	AF ^(‡)		205	0	205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	17	17	17	17	17	17	103		
	1	2018	FMS ^(‡)		245	0	245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20	20	20	20	125		
	1	2018	Total		570	0	570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	47	47	47	47	47	47	288		
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2206 / AMRAAM										Item Number / Title [DODIC]: 1 / AMRAAM														
Cost Elements (Units in Each)							Fiscal Year 2021										Fiscal Year 2022													BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT				Calendar Year 2021										Calendar Year 2022														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP			
1.1.1) AIM-120 MISSILE - ALL-UP-ROUND (AUR) ⁽¹⁾																																		
Prior Years Deliveries: 2012																																		
	1	2014	NAVY		7	7	0																											0
	1	2014	AF ^(‡)		190	190	0																											0
	1	2014	FMS ^(‡)		200	200	0																											0
	1	2014	Total		397	397	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2016	NAVY		117	117	0																											0
	1	2016	AF ^(‡)		281	281	0																											0
	1	2016	FMS ^(‡)		314	314	0																											0
	1	2016	Total		712	712	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2017	NAVY		163	149	14	14																										0
	1	2017	AF ^(‡)		235	216	19	19																										0
	1	2017	FMS ^(‡)		244	223	21	21																										0
	1	2017	Total		642	588	54	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2018	NAVY		120	60	60	10	10	10	10	10																					0	
	1	2018	AF ^(‡)		205	102	103	17	17	17	17	17	18																				0	
	1	2018	FMS ^(‡)		245	120	125	20	21	21	21	21																					0	
	1	2018	Total		570	282	288	47	48	48	48	48	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2					P-1 Line Item Number / Title: 2206 / AMRAAM				Item Number / Title [DODIC]: 1 / AMRAAM			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 Missile System - Tucson, AZ	400	400	960	6	3	21	24	7	6	25	31
(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule. "A" in the Delivery Schedule indicates the Contract Award Date. Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2209 / Sidewinder					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0204162N, 0204138M				Other Related Program Elements: 0207161N, 0207161F, 0604319A					
Line Item MDAP/MAIS Code: 000												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,943	207	152	185	-	185	191	198	200	192	669	3,937
Gross/Weapon System Cost (<i>\$ in Millions</i>)	701.793	92.497	70.912	79.692	0.000	79.692	79.047	82.261	89.842	91.638	491.372	1,779.054
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	701.793	92.497	70.912	79.692	0.000	79.692	79.047	82.261	89.842	91.638	491.372	1,779.054
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	701.793	92.497	70.912	79.692	0.000	79.692	79.047	82.261	89.842	91.638	491.372	1,779.054
<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>)	-	1.884	0.138	3.208	-	3.208	1.574	3.799	3.293	3.619	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	328,825.53	404,439.61	400,776.32	378,232.43	-	378,232.43	360,481.68	365,616.16	398,880.00	424,343.75	629,267.56	400,556.77
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The AIM-9X Block II/II+ Sidewinder (AIM-9X Blk II/II+) continues the evolution of the AIM-9 series of missiles. This missile program delivers a launch and leave, air combat munition that uses passive Infrared (IR) energy to acquire and track enemy air targets and complements the radar guided Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in short range engagements is essential to the Department of the Navy, and this missile provides first shot, first kill opportunities against enemy targets employing IR countermeasures. Anti-Tamper features have been incorporated to protect improvements inherent in this design. The AIM-9X Block II missile is critical to project power and win decisively in accordance with the Fiscal Year 2015 Defense Planning Guidance and Chief of Naval Operations' Navigation Plan for 2015-2019. AIM-9X is a Post Milestone C, Acquisition Category IC (ACAT-IC) joint service program led by the Department of the Navy. In June 2011, the Milestone Decision Authority (MDA) established the AIM-9X Block II missile program which was approved for entry at Milestone C for Low Rate Initial Production (LRIP). The 2366 A/B certification and Acquisition Program Baseline for AIM-9X Block II was signed December 23, 2011, and the Block I program was terminated. In August 2015, the program received approval for Full Rate Production (FRP), and the Acquisition Program Baseline was re-established. The first FRP Contract (FRP-1) was awarded in 2015 and FRP-2 awarded in 2016. The program plans to award FRP-3 in 2017 and FRP-4 in 2018. In FY 2017, the program will begin to produce a third variant of the missile labeled the AIM-9X Block II PLUS (Block II+) to meet survivability requirements inherent to the 5th generation aircraft platforms. The Block II+ will be procured only for specific critical mission area and the balance of the AIM-9X inventory will be continue to be produced as regular Block II missiles to meet Naval Munitions Requirement Process (NMRP) demands. In FY 2017, the missile will also incorporate the obsolescence redesign of the control actuator system battery into both Block II and Block II+ variants.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy							Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2209 / Sidewinder				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: 0204162N, 0204138M			Other Related Program Elements: 0207161N, 0207161F, 0604319A				
Line Item MDAP/MAIS Code: 000										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / SIDEWINDER BLOCK II	P-5a, P-21			1,943 / 701.793	207 / 92.497	152 / 70.912	185 / 79.692	- / 0.000	185 / 79.692
P-40	Total Gross/Weapon System Cost				1,943 / 701.793	207 / 92.497	152 / 70.912	185 / 79.692	- / 0.000	185 / 79.692
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: FY 2018 provides funding to procure the fourth lot of Full Rate Production (FRP) AIM-9X Block II (Blk II) missiles, as well as the second lot of AIM-9X Block II Plus (Blk II+) All Up Round missiles for the Navy. FY 2018 also begins the procurement of missiles for the Army upon successful Milestone C approval of the Indirect Fire Protection Capability Increment 2 (IFPC2) program. Army IFPC2 is currently funded under RDTE,AF PE 0604319A, Project DU3 (R1-72). Unit costs are based on quantities procured by all services including the Navy and Army, as well as Foreign Military Sales. Total Program quantity by service includes a mix of All Up Round (AUR) missiles and Captive Air Training Missiles (CATM) as such: The Navy will procure 3,937 total missiles under this Budget Line Item: 1,289 Block I missiles (885 AURs and 404 CATMs) and 2,648 Block II missiles, including Block II+ (1,591 AURs and 581 CATMs). In addition, the Navy procured 63 Block I missiles in FY 2001 under the AIM-9M Modification program (48 AURs and 15 CATMs). The Air Force will procure 5,030 total missiles under Budget Line Item 3479 (P1-4): 1,678 Block I missiles (1,093 AURs and 585 CATMs) and 3,352 Block II missiles, including Block II+ (2,859 AURs and 493 CATMs). In addition, the Air Force procured 67 Block I missiles in FY 2001 under the AIM-9M Modification program (45 AURs and 22 CATMs). The Army will begin to procure AIM-9X Block II missiles under Budget Line Item C6100 (P1-3) for the Integrated Fire Protection Control (IFPC) Increment 2 Program.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2209 / Sidewinder						Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				1,943			207			152			185			-			185		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				701.793			92.497			70.912			79.692			0.000			79.692		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				701.793			92.497			70.912			79.692			0.000			79.692		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				701.793			92.497			70.912			79.692			0.000			79.692		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			1.884			0.138			3.208			-			3.208		
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				361,190.43			446,845.41			466,526.32			430,767.57			-			430,767.57		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total					
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)			
Flyaway - MISSILE Cost																					
Recurring Cost																					
1.1.1) All Up Round - Block II ^(†) (1)	431,211.71	444	191.458	367,412.50	160	58.786	373,640.00	50	18.682	378,198.02	101	38.198	-	-	-	378,198.02	101	38.198			
1.1.2) Captive Air Training Missile - Block II ^(†) (2)	227,642.86	210	47.805	193,148.94	47	9.078	210,958.33	24	5.063	212,681.82	44	9.358	-	-	-	212,681.82	44	9.358			
1.1.3) All Up Round - Block II Plus ^(†) (3)	-	-	-	-	-	-	409,589.74	78	31.948	413,525.00	40	16.541	-	-	-	413,525.00	40	16.541			
1.1.4) Engineering Change Orders - Block II ⁽⁴⁾	-	-	2.038	-	-	5.307	-	-	1.405	-	-	1.632	-	-	-	-	-	1.632			
1.1.5) Diminishing Manufacturing Sources (DMS) ⁽⁵⁾	-	-	1.058	-	-	3.297	-	-	0.814	-	-	1.563	-	-	-	-	-	1.563			
1.1.6) Government Cost (GFE & Testing) - Block II ⁽⁶⁾	-	-	0.350	-	-	0.059	-	-	0.056	-	-	0.063	-	-	-	-	-	0.063			
Subtotal: Recurring Cost	-	-	242.709	-	-	76.527	-	-	57.968	-	-	67.355	-	-	-	-	-	67.355			
Subtotal: Flyaway - MISSILE Cost	-	-	242.709	-	-	76.527	-	-	57.968	-	-	67.355	-	-	-	-	-	67.355			
Flyaway - Prior Year Sidewinder Block 1 Cost																					
Recurring Cost																					
2.1.1) Prior Year Sidewinder Block 1	-	-	364.058	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2209 / Sidewinder						Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Subtotal: Recurring Cost	-	-	364.058	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway - Prior Year Sidewinder Block 1 Cost	-	-	364.058	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway - Nonrecurring and Ancillary Equip Cost																		
Non Recurring Cost																		
3.1.1) Special Tool & Test Equip (ST/STE) - Block II ⁽⁷⁾	-	-	7.552	-	-	4.972	-	-	2.448	-	-	1.997	-	-	-	-	-	1.997
3.1.2) Missile Containers - Block II ^(†) ⁽⁸⁾	13,262.03	187	2.480	11,859.65	57	0.676	11,674.42	43	0.502	11,942.31	52	0.621	-	-	-	11,942.31	52	0.621
3.1.3) Nonrecurring Engineering - Block II ⁽⁹⁾	-	-	22.109	-	-	1.544	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	32.141	-	-	7.192	-	-	2.950	-	-	2.618	-	-	-	-	-	2.618
Subtotal: Flyaway - Nonrecurring and Ancillary Equip Cost	-	-	32.141	-	-	7.192	-	-	2.950	-	-	2.618	-	-	-	-	-	2.618
Support - Production Support Cost																		
4.1) Production Technical Support - Block II ⁽¹⁰⁾	-	-	13.637	-	-	1.138	-	-	1.977	-	-	2.016	-	-	-	-	-	2.016
Subtotal: Support - Production Support Cost	-	-	13.637	-	-	1.138	-	-	1.977	-	-	2.016	-	-	-	-	-	2.016
Support - Support Costs Cost																		
5.1) Peculiar Support Equipment - Block II ⁽¹¹⁾	-	-	0.511	-	-	0.118	-	-	0.033	-	-	0.033	-	-	-	-	-	0.033
5.2) Training Support - Block II ⁽¹²⁾	-	-	0.162	-	-	-	-	-	0.028	-	-	0.029	-	-	-	-	-	0.029
5.3) Training Equipment - Block II ⁽¹³⁾	-	-	12.869	-	-	1.778	-	-	2.185	-	-	1.755	-	-	-	-	-	1.755
5.4) Contract Support - Block II	-	-	4.613	-	-	0.918	-	-	0.848	-	-	0.865	-	-	-	-	-	0.865
5.5) Government In-House Support - Block II ⁽¹⁴⁾	-	-	31.093	-	-	4.826	-	-	4.923	-	-	5.021	-	-	-	-	-	5.021
Subtotal: Support - Support Costs Cost	-	-	49.248	-	-	7.640	-	-	8.017	-	-	7.703	-	-	-	-	-	7.703

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Exhibit P-5, Cost Analysis: FY 2018 Navy											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2209 / Sidewinder						Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Gross/Weapon System Cost	361,190.43	1,943	701.793	446,845.41	207	92.497	466,526.32	152	70.912	430,767.57	185	79.692	-	-	0.000	430,767.57	185	79.692
Remarks: [Flyaway]																		
(†) indicates the presence of a P-5a																		
Footnotes:																		
(1) The All Up Round (AUR) Block II procures tactical missiles used for combat and aggression deterrence. The FY 2016 unit cost reflects actual quantities awarded on the Full Rate Production Lot 3 contract in July 2016. The unit cost increase from FY 2017 to FY 2018 over inflation is due to integration of a series of Engineering Change Proposals which will provide additional functionality.																		
(2) The Captive Air Training Missile (CATM) are used in pilot training in non-combat areas and do not launch. They are similar to AUR missiles but do not include a rocket motor or warhead. The FY 2016 to FY 2017 increase in unit cost is associated with decreased quantity. The slight unit cost increase from FY 2017 to FY 2018 over inflation is due to prime vendor labor costs identified in the fixed price rate agreement. While the Navy quantity increased from 24 in FY 2017 to 44 in FY 2018, the overall number of CATM buys for all services decreases from 193 in FY 2017 to 122 in FY 2018.																		
(3) Increased unit cost from FY 2017 to FY 2018 is due to inflation. The overall number of Block II+ buys in FY 2018 has increased for all services by 14 missiles, however, it has not increased enough to reach the next pricing band which would have provided a lower unit cost.																		
(4) The Engineering Change Orders line provides funding to test and qualify class 1 engineering changes proposed by the prime vendor into missile production. Fluctuations correspond directly with total cost of hardware procured. Increase in funding from FY 2017 to FY 2018 is due to increased total hardware buy.																		
(5) DMS provides funding to design, develop, test and qualify form/fit/function replacement components to the production missile as a result of changes in sub-vendor manufacturers. FY 2018 increases associated with obsolescence warhead and material required.																		
(6) The Government Furnished Equipment line procures government owned hardware required to produce the missiles. The primary item procured are warheads. The increase from FY 2017 to FY 2018 is due to increased total hardware buy.																		
(7) The ST/STE line provides funding for production tooling and test equipment to the AIM-9X manufacturing line to ensure missiles are produced efficiently, and within specifications. One time special tooling buy in FY 2017 is to increase total missile production capacity to 1,000 missiles per year.																		
(8) Containers are procured to ship missiles and are procured 1 for every 4 missiles of each variant (missile variants cannot be mixed within a container). Increase in quantity FY 2018 due to inventory requirements.																		
(9) The Non-Recurring Engineering line pays for one time efforts to ensure production line continuity.																		
(10) The production tech support line includes funding to manage technical documentation, training development and delivery, production support, and management of government owned property, to support production of AIM-9X configurations. FY 2017 to FY 2018 increase reflects additional production logistics support associated with Block II AUR missiles.																		
(11) The PSE line provides gauges and equipment to calibrate government furnished rocket motors.																		
(12) The training support line provides technical publications and training manuals to fleet maintainers.																		
(13) The training equipment line includes the Telemetry (TM) Kits used to collect flight data for production qualification testing and weapons safety evaluations. TM kits are based on missile quantities procured and are manufactured by Naval Air Warfare Center, China Lake.																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2209 / Sidewinder	Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(14) The government in-house support line provides US Government Systems Engineering and Project Management support at Naval Air Warfare Centers for the production of the AIM-9X missile to ensure compliance with joint service developed cost, schedule and performance requirements. FY 2017 to FY 2018 and inflation increases are associated with additional engineering work required to evaluate new missile components being incorporated into production.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2			P-1 Line Item Number / Title: 2209 / Sidewinder					Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II				
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 (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) All Up Round - Block II ^(†)		2015	Raytheon Missile Systems / Tucson, AZ	C / FPIF	NAVAIR	Sep 2015	Sep 2016	102	401,676.47	Y		Jan 2014
1.1.1) All Up Round - Block II ^(†)		2016	Raytheon Missile Systems / Tucson, AZ	C / FPIF	NAVAIR	Jul 2016	Sep 2017	160	367,412.50	Y		Jan 2015
1.1.1) All Up Round - Block II ^(†)		2017	Raytheon Missile Systems / Tucson, AZ	C / FPIF	NAVAIR	Mar 2017	Sep 2018	50	373,640.00	Y		Jan 2016
1.1.1) All Up Round - Block II ^(†)		2018	Raytheon Missile Systems / Tucson, AZ	C / FPIF	NAVAIR	Mar 2018	Sep 2019	101	378,198.02	Y		Mar 2017
1.1.2) Captive Air Training Missile - Block II		2015	Raytheon Missile System / Tucson, AZ	C / FPIF	NAVAIR	Sep 2015	Sep 2016	54	211,351.85	Y		Jan 2014
1.1.2) Captive Air Training Missile - Block II		2016	Raytheon Missile System / Tucson, AZ	C / FPIF	NAVAIR	Jul 2016	Sep 2017	47	193,148.94	Y		Jan 2015
1.1.2) Captive Air Training Missile - Block II		2017	Raytheon Missile System / Tucson, AZ	C / FPIF	NAVAIR	Mar 2017	Sep 2018	24	210,958.33	Y		Jan 2016
1.1.2) Captive Air Training Missile - Block II		2018	Raytheon Missile System / Tucson, AZ	C / FPIF	NAVAIR	Mar 2018	Sep 2019	44	212,681.82	Y		Mar 2017
1.1.3) All Up Round - Block II Plus ^(†)		2017	Raytheon Missile System / Tucson, AZ	C / FPIF	NAVAIR	Mar 2017	Sep 2018	78	409,589.74	Y		Jan 2016
1.1.3) All Up Round - Block II Plus ^(†)		2018	Raytheon Missile System / Tucson, AZ	C / FPIF	NAVAIR	Mar 2018	Sep 2019	40	413,525.00	Y		Mar 2017
3.1.2) Missile Containers - Block II		2015	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Sep 2015	Sep 2016	44	11,977.27	Y		Jan 2014
3.1.2) Missile Containers - Block II		2016	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Jul 2016	Sep 2017	57	11,859.65	Y		Jan 2015
3.1.2) Missile Containers - Block II		2017	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2017	Sep 2018	43	11,674.42	Y		Jan 2016
3.1.2) Missile Containers - Block II		2018	Raytheon Missile System ⁽¹⁵⁾ / Tucson, AZ	C / FPIF	NAVAIR	Mar 2018	Sep 2019	52	11,942.31	Y		Mar 2017
^(†) indicates the presence of a P-21												
Footnotes:												
⁽¹⁵⁾ Annual Production Rate limitations are based on 4 missiles per 1 container ratio.												

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2209 / Sidewinder										Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II															
Cost Elements (Units in Each)							Fiscal Year 2015										Fiscal Year 2016													B A L A N C E					
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015										Calendar Year 2016																		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P				
1.1.1) All Up Round - Block II ⁽¹⁾																																			
Prior Years Deliveries: 342																																			
	1	2015	NAVY	102 ⁽¹⁶⁾	0	102											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	101
	1	2015	AF ^(‡)	243	0	243											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	243
	1	2015	FMS ^(‡)	98	0	98											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98
	1	2015	Total	443	0	443											-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	442
	1	2016	NAVY	160	0	160																								A -	-	-	-	160	
	1	2016	ARMY ^(‡)	7	0	7																								A -	-	-	-	7	
	1	2016	AF ^(‡)	429	0	429																								A -	-	-	-	429	
	1	2016	FMS ^(‡)	64	0	64																								A -	-	-	-	64	
	1	2016	Total	660	0	660																								-	-	-	-	660	
	1	2017	NAVY	50 ⁽¹⁷⁾	0	50																												50	
	1	2017	ARMY ^(‡)	3	0	3																												3	
	1	2017	AF ^(‡)	70	0	70																												70	
	1	2017	FMS ^(‡)	126	0	126																												126	
	1	2017	Total	249	0	249																												249	
	1	2018	NAVY	101	0	101																												101	
	1	2018	ARMY ^(‡)	142	0	142																												142	
	1	2018	AF ^(‡)	135	0	135																												135	
	1	2018	FMS ^(‡)	10	0	10																												10	
	1	2018	Total	388	0	388																												388	
1.1.3) All Up Round - Block II Plus ⁽³⁾																																			
	2	2017	NAVY	78	0	78																												78	
	2	2017	AF ^(‡)	140	0	140																												140	
	2	2017	Total	218	0	218																												218	
	2	2018	NAVY	40	0	40																												40	
	2	2018	AF ^(‡)	100	0	100																												100	
	2	2018	FMS ^(‡)	92	0	92																												92	
	2	2018	Total	232	0	232																												232	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2209 / Sidewinder										Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II																	
Cost Elements (Units in Each)							Fiscal Year 2017													Fiscal Year 2018													B A L A N C E				
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017													Calendar Year 2018																	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
1.1.1) All Up Round - Block II ⁽¹⁾																																					
Prior Years Deliveries: 342																																					
	1	2015	NAVY	102 ⁽¹⁶⁾	1	101	-	35	35	21	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2015	AF ^(‡)	243	0	243	-	-	-	28	52	63	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
	1	2015	FMS ^(‡)	98	0	98	-	-	-	9	9	9	8	6	8	6	8	9	8	9	9	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2015	Total	443	1	442	-	35	35	58	71	72	58	56	8	6	8	9	8	9	9	-	-	-	-	-	-	-	-	-	-	0					
	1	2016	NAVY	160	0	160	-	-	-	-	-	-	-	-	-	-	14	14	13	13	13	13	14	14	13	13	13	13	-	-	0						
	1	2016	ARMY ^(‡)	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	-	-	0						
	1	2016	AF ^(‡)	429	0	429	-	-	-	-	-	-	-	-	-	-	36	36	36	36	36	36	36	36	36	35	35	35	-	-	0						
	1	2016	FMS ^(‡)	64	0	64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	5	5	6	5	5	6	5	5	5	16						
	1	2016	Total	660	0	660	-	-	-	-	-	-	-	-	-	-	50	50	49	49	55	55	56	57	55	54	55	54	5	16							
	1	2017	NAVY	50 ⁽¹⁷⁾	0	50	A -															-	-	-	-	-	-	-	-	-	-	-	-	5	45		
	1	2017	ARMY ^(‡)	3	0	3	A -															-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
	1	2017	AF ^(‡)	70	0	70	A -															-	-	-	-	-	-	-	-	-	-	-	-	6	64		
	1	2017	FMS ^(‡)	126	0	126	A -															-	-	-	-	-	-	-	-	-	-	-	-	-	-	126	
	1	2017	Total	249	0	249	-															-	-	-	-	-	-	-	-	-	-	-	-	-	11	238	
	1	2018	NAVY	101	0	101																A -					-	-	-	-	-	-	-	-	-	101	
	1	2018	ARMY ^(‡)	142	0	142																A -					-	-	-	-	-	-	-	-	-	142	
	1	2018	AF ^(‡)	135	0	135																A -					-	-	-	-	-	-	-	-	-	135	
	1	2018	FMS ^(‡)	10	0	10																A -					-	-	-	-	-	-	-	-	-	10	
	1	2018	Total	388	0	388																-					-	-	-	-	-	-	-	-	-	388	
1.1.3) All Up Round - Block II Plus ⁽³⁾																																					
	2	2017	NAVY	78	0	78	A -															-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	71
	2	2017	AF ^(‡)	140	0	140	A -															-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	128
	2	2017	Total	218	0	218	-															-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	199
	2	2018	NAVY	40	0	40																A -					-	-	-	-	-	-	-	-	-	-	40
	2	2018	AF ^(‡)	100	0	100																A -					-	-	-	-	-	-	-	-	-	-	100
	2	2018	FMS ^(‡)	92	0	92																A -					-	-	-	-	-	-	-	-	-	-	92
	2	2018	Total	232	0	232																-					-	-	-	-	-	-	-	-	-	-	232
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2209 / Sidewinder										Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019										Fiscal Year 2020													BALANCE					
OCCO	MFR#	FY	SERVICE	PROCQTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT				Calendar Year 2019										Calendar Year 2020															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP				
1.1.1) All Up Round - Block II ⁽¹⁾																																			
Prior Years Deliveries: 342																																			
	1	2015	NAVY	102 ⁽¹⁶⁾	102	0																													
	1	2015	AF ^(‡)	243	243	0																													
	1	2015	FMS ^(‡)	98	98	0																													
	1	2015	Total	443	443	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
	1	2016	NAVY	160	160	0	-	-	-																										
	1	2016	ARMY ^(‡)	7	7	0	-	-	-																										
	1	2016	AF ^(‡)	429	429	0	-	-	-																										
	1	2016	FMS ^(‡)	64	48	16	6	5	5																										
	1	2016	Total	660	644	16	6	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
	1	2017	NAVY	50 ⁽¹⁷⁾	5	45	5	4	4	4	4	4	4	4	4	-	-	-	-																
	1	2017	ARMY ^(‡)	3	0	3	-	-	-	-	-	-	-	1	1	1	-	-	-	-															
	1	2017	AF ^(‡)	70	6	64	6	6	6	6	5	6	6	6	5	-	-	-	-																
	1	2017	FMS ^(‡)	126	0	126	-	-	-	11	10	11	10	11	10	11	10	11	10																
	1	2017	Total	249	11	238	11	10	10	21	19	21	20	21	21	22	20	11	10	11	10	-	-	-	-	-	-	-	-	-					
	1	2018	NAVY	101	0	101	-	-	-	-	-	-	-	-	-	-	10	9	9	9	8	8	8	8	8	8	8	8	8						
	1	2018	ARMY ^(‡)	142	0	142	-	-	-	-	-	-	-	-	-	-	35	15	12	12	10	10	10	9	9	9	6	5							
	1	2018	AF ^(‡)	135	0	135	-	-	-	-	-	-	-	-	-	-	13	13	12	12	12	12	12	11	11	11	11	5							
	1	2018	FMS ^(‡)	10	0	10	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	-	-							
	1	2018	Total	388	0	388	-	-	-	-	-	-	-	-	-	-	59	38	34	34	31	31	31	29	29	29	25	18	-						
1.1.3) All Up Round - Block II Plus ⁽³⁾																																			
	2	2017	NAVY	78	7	71	6	7	6	7	6	7	6	7	6																				
	2	2017	AF ^(‡)	140	12	128	12	11	12	12	11	12	12	11	12	11																			
	2	2017	Total	218	19	199	18	18	18	19	17	19	18	18	18	19	17	-	-	-	-	-	-	-	-	-	-	-	-						
	2	2018	NAVY	40	0	40	-	-	-	-	-	-	-	-	-	-	5	4	5	3	4	3	3	3	3	3	2	3	2						
	2	2018	AF ^(‡)	100	0	100	-	-	-	-	-	-	-	-	-	-	8	8	9	8	8	9	8	8	9	8	8	9							
	2	2018	FMS ^(‡)	92	0	92	-	-	-	-	-	-	-	-	-	-	8	8	7	8	8	7	8	8	7	8	8	7							
	2	2018	Total	232	0	232	-	-	-	-	-	-	-	-	-	-	21	20	21	19	20	19	19	19	19	18	19	18	-						
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2					P-1 Line Item Number / Title: 2209 / Sidewinder				Item Number / Title [DODIC]: 1 / SIDEWINDER BLOCK II		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 Missile Systems - Tucson, AZ	300	600	1,400	0	9	16	25	0	5	19	24
2	Raytheon Missile System - Tucson, AZ	300	600	1,400	0	5	19	24	0	5	19	24

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"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:

⁽¹⁶⁾ FY 2015 FMS AUR delivery scheduled begins and ends 4 months after USG deliveries.

⁽¹⁷⁾ FY 2017 FMS AUR delivery scheduled begins and ends 4 months after USG deliveries.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2230 / JT Standoff Weapon (JSOW)					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 000												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	5,168	-	-	-	-	-	-	-	-	-	-	5,168
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,254.610	12.919	2.232	5.487	0.000	5.487	1.227	0.000	0.000	0.000	-	2,276.475
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,254.610	12.919	2.232	5.487	0.000	5.487	1.227	0.000	0.000	0.000	-	2,276.475
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,254.610	12.919	2.232	5.487	0.000	5.487	1.227	0.000	0.000	0.000	-	2,276.475
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	225,514.51	-	-	-	-	-	-	-	-	-	-	225,514.51
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Joint Standoff Weapon (JSOW) is a joint United States Navy (USN)/United States Air Force (USAF) program with the USN as the lead service. The JSOW program provides an air-to-ground glide weapon (AGM-154) capable of attacking a variety of targets during day, night, and adverse weather conditions for use against fixed area targets and moving maritime targets. The JSOW enhances aircraft survivability as compared to alternate interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW Global Positioning System (GPS)/Inertial Navigation System (INS) capability allows several target kills per aircraft sortie.

The JSOW baseline BLU-97 variant (AGM-154A) has been integrated on USN (F/A-18C/D/E/F) and USAF (F-16C/D, B-2 and B-52) aircraft. The JSOW BLU-108 (AGM-154B) variant provides an anti-armor/tank capability. The JSOW unitary variant (AGM-154C) utilizes the common airframe of the AGM-154A and AGM-154B variants and incorporates an infrared uncooled seeker with autonomous targeting acquisition. The payload includes a 500 pound class Broach multi-stage warhead. AGM-154C was approved for Low Rate Initial Production (LRIP) on 26 June 2003. Full Rate Production (FRP) of the AGM-154C began in December 2004. A Network Enabled Weapon (NEW) moving maritime target capability has been incorporated in JSOW-C production units (AGM-154C-1 variant) starting with the FY 2009 procurement. The AGM-154-C-1 units retain the basic AGM-154C capability against fixed land targets.

Justification:

FY 2018 funding is required for Telemetry Instrumentation Kit (TIK) 2.0, non-recurring engineering (NRE), procurement, and installations. TIKs are necessary to support the life cycle of the weapon system; including fleet training events, joint and fleet exercises and Tactics, Techniques and Procedure (TTP) development.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2234 / Standard Missile					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 000												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	455	101	125	117	8	125	100	100	100	100	594	1,800
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,841.079	417.252	543.712	510.875	35.208	546.083	521.100	534.357	543.658	554.604	3,898.752	9,400.597
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,841.079	417.252	543.712	510.875	35.208	546.083	521.100	534.357	543.658	554.604	3,898.752	9,400.597
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,841.079	417.252	543.712	510.875	35.208	546.083	521.100	534.357	543.658	554.604	3,898.752	9,400.597
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	4,046.327	4,131.208	4,349.696	4,366.453	4,401.000	4,368.664	5,211.000	5,343.570	5,436.580	5,546.040	6,563.556	5,222.554
Description: The SM-6 Block I provides an extended range engagement capability to provide the air superiority and the umbrella of protection for joint U.S. forces and allies against the full spectrum of manned-fixed and rotary-winged aircraft, unmanned aerial vehicles, and land attack and anti-ship cruise missiles in flight. This capability contributes significantly to the continuous protection of forward deployed ground maneuver forces as well as theater rear assets. The SM-6 is the primary extended range air defense weapon for AEGIS cruisers and destroyers and potentially future combatants. [P5 / FE002 SM-6 Block IA ECP]: Production cut-in decision for the Engineering Change Proposal (ECP) for the SM-6 Block IA configuration was included in the FY 2015 SM-6 Production Contract. The ECP cost line shown here is additional cost required to implement the ECP and procure the maximum number of SM-6 Block IA All Up Rounds (AURs), limited by maximum production rate. The Navy will procure SM-6 Block I and SM-6 Block IA missiles, not to exceed the quantities shown here. Increase in Block IA ECP costs from FY 2016 to FY 2017 is due to increasing quantities of ECPs to be incorporated. In FY 2015 - 2017, the Cost Element 1.1.1 (FE002 SM-6 Block I All Up Round) combined with 1.1.2 (FE002 SM-6 Block IA ECP) recurring hardware costs procure both configurations of SM-6. The SM-6 Block IA ECP is expected to be at FRP procurement rates starting in FY 2018. In FY 2018, the funding from Cost Elements 1.1.1 and 1.1.2 have been combined and realigned to Cost Element 1.1.3 (SM-6 Block I/IA All Up Round Missile). In FY 2018, the annual unit cost is a blended unit cost across SM-6 BLK I and BLK IA variants. Further detail can be provided at a higher classification level.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2234 / Standard Missile				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 000										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / STANDARD MISSILE	P-5a, P-21			455 / 1,841.079	101 / 417.252	125 / 543.712	117 / 510.875	8 / 35.208	125 / 546.083
P-40	Total Gross/Weapon System Cost				455 / 1,841.079	101 / 417.252	125 / 543.712	117 / 510.875	8 / 35.208	125 / 546.083
*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.										
Justification: FY 2018 provides funding to procure 117 SM-6 Block I and SM-6 Block IA missiles to support warfighter requirements; as well as, required support costs such as production engineering, diminishing manufacturing sources (DMS), containers, fleet documentation, and install/checkout equipment. Starting in FY 2018, cost element 1.1.3) SM-6 Block I/IA All Up Round Missile will include costs required to implement the ECP for both SM-6 Block I and SM-6 Block IA missiles. The Navy will procure the maximum number of SM-6 Block IA All Up Rounds (AURs), limited by maximum production rate. The Navy will procure a combination of SM-6 Block I and SM-6 Block IA missiles not to exceed the quantities requested. OCO: The addition of overseas contingency operations (OCO) funding in FY 2018 will replenish missile inventory expended by the USS MASON and USS NITZE due to recent events in the Red Sea.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2234 / Standard Missile						Item Number / Title [DODIC]: 1 / STANDARD MISSILE						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				455		101		125		117		8		125				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				1,841.079		417.252		543.712		510.875		35.208		546.083				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				1,841.079		417.252		543.712		510.875		35.208		546.083				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				1,841.079		417.252		543.712		510.875		35.208		546.083				
(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>				4,046.327		4,131.208		4,349.696		4,366.453		4,401.000		4,368.664				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Hardware - SM-6 Cost																		
Recurring Cost																		
1.1.1) FE002 SM-6 Block I All Up Round Missile ^(†)	2,249.653	603	1,356.541	2,532.000	101	255.732	2,557.324	125	319.666	-	-	-	-	-	-	-	-	
1.1.2) FE002 SM-6 Block IA ECP ⁽¹⁾	-	-	101.657	-	-	98.132	-	-	152.712	-	-	-	-	-	-	-	-	
1.1.3) SM-6 Block I/IA All Up Round Missile ^{(†) (2)}	-	-	-	-	-	-	-	-	-	3,771.094	117	441.218	4,136.500	8	33.092	3,794.480	125	474.310
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) ^(†)	159.029	692	110.048	253.099	101	25.563	230.592	125	28.824	216.342	117	25.312	264.500	8	2.116	219.424	125	27.428
1.1.5) FE002 Production Start Up	-	-	28.102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: Recurring Cost	-	-	1,596.348	-	-	379.427	-	-	501.202	-	-	466.530	-	-	35.208	-	-	501.738
Subtotal: Hardware - SM-6 Cost	-	-	1,596.348	-	-	379.427	-	-	501.202	-	-	466.530	-	-	35.208	-	-	501.738
Support - SM-6 Cost Cost																		
2.1) FE831 Production Engineering/Support	-	-	118.658	-	-	24.188	-	-	25.805	-	-	26.904	-	-	-	-	-	26.904
2.2) FE851 Component Improvement	-	-	47.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2234 / Standard Missile							Item Number / Title [DODIC]: 1 / STANDARD MISSILE					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
2.3) FE851 Diminishing Manufacturing Sources (DMS) ⁽³⁾	-	-	28.056	-	-	9.475	-	-	12.719	-	-	13.380	-	-	-	-	-	13.380
2.4) FE951 Tools and Test Equipment	-	-	13.968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5) FE958 Containers	-	-	1.149	-	-	0.219	-	-	0.223	-	-	0.228	-	-	-	-	-	0.228
2.6) FE981 ILS/Fleet Documentation	-	-	4.547	-	-	0.631	-	-	0.644	-	-	0.657	-	-	-	-	-	0.657
2.7) FE971 Install/Checkout Equip/Training Material	-	-	29.450	-	-	3.312	-	-	3.119	-	-	3.176	-	-	-	-	-	3.176
Subtotal: Support - SM-6 Cost Cost	-	-	243.628	-	-	37.825	-	-	42.510	-	-	44.345	-	-	-	-	-	44.345
Support - Other Cost																		
3.1) WAXXX Acquisition Workforce Fund - 2009	-	-	1.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - Other Cost	-	-	1.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	4,046.327	455	1,841.079	4,131.208	101	417.252	4,349.696	125	543.712	4,366.453	117	510.875	4,401.000	8	35.208	4,368.664	125	546.083

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

Footnotes:

⁽¹⁾ Production cut-in decision for the Engineering Change Proposal (ECP) for the SM-6 Block IA configuration was included in the FY 2015 SM-6 Production Contract. The ECP cost line shown here is additional cost required to implement the ECP and procure the maximum number of SM-6 Block IA All Up Rounds (AURs), limited by maximum production rate. The Navy will procure SM-6 Block I and SM-6 Block IA missiles, not to exceed the quantities shown here. Increase in Block IA ECP costs from FY 2016 to FY 2017 is due to increasing quantities of ECPs to be incorporated. Further detail can be provided at a higher classification level.

⁽²⁾ FY 2017 calculated unit cost is based on the SM-6 Block I AUR only, while awaiting negotiated pricing for the SM-6 Block IA. FY 2018 combines cost code 1.1.1) FE002 SM-6 Block I All UP Round Missile and 1.1.2) FE002 SM-6 Block IA ECP into 1.1.3) SM-6 Block I/IA All Up Round Missile to provide the blended costs of the Block I and Block IA missiles. FY 2018 unit cost of SM-6 AURs and canisters varies from FY 2018 OCO unit costs due to ratio of SM-6 Block I and Block IAs to be procured. The Navy remains committed to procuring the maximum number of SM-6 Block IAs, limited by maximum production rate.

⁽³⁾ The FY 2017 request restored the DMS line to meet SM-6 Block I and Block IA obsolescence requirements. Stable DMS funding is critical to achieve SM-6 Block I and Block IA deliveries in support of the total quantity of 1,800.

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2234 / Standard Missile					Item Number / Title [DODIC]: 1 / STANDARD MISSILE			
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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) FE002 SM-6 Block I All Up Round Missile		2013	Raytheon CO . / Tucson, AZ	SS / FP	NAVSEA	Sep 2013	Apr 2015	89	2,762.551	Y		
1.1.1) FE002 SM-6 Block I All Up Round Missile		2014	Raytheon CO .. (4) / Tucson, AZ	SS / FP	NAVSEA	Jun 2014	Apr 2016	93	2,570.151	Y		
1.1.1) FE002 SM-6 Block I All Up Round Missile		2015 (5)	Raytheon CO / Tucson AZ	SS / FP	NAVSEA	Apr 2015	Apr 2017	95	2,535.000	Y		
1.1.1) FE002 SM-6 Block I All Up Round Missile		2016	Raytheon CO / Tucson AZ	SS / FP	NAVSEA	Apr 2016	Apr 2018	101	2,532.000	Y		
1.1.1) FE002 SM-6 Block I All Up Round Missile		2017	Raytheon CO / Tucson AZ	SS / FP	NAVSEA	Apr 2017	Apr 2019	125	2,557.324	Y		
1.1.3) SM-6 Block I/IA All Up Round Missile (†)		2018	Raytheon CO (6) / Tucson AZ	SS / FP	NAVSEA	Apr 2018	Apr 2020	117	3,771.094	Y		
1.1.3) SM-6 Block I/IA All Up Round Missile (†)	✓	2018	Raytheon CO (6) / Tucson AZ	SS / FP	NAVSEA	Apr 2018	Apr 2020	8	4,136.500	Y		
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) (†)		2014	BAE-FY2014 / Minneapolis, MN	SS / FP	NAVSEA	Dec 2013	Aug 2015	93	216.553	Y		
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) (†)		2015	BAE / Minneapolis, MN	SS / FP	NAVSEA	Mar 2015	May 2016	95	218.920	Y		
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) (†)		2016	BAE / Minneapolis, MN	SS / FP	NAVSEA	Mar 2016	May 2017	101	253.099	Y		
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) (†)		2017	BAE / Minneapolis, MN	SS / FP	NAVSEA	Mar 2017	May 2018	125	230.592	Y		
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) (†)		2018	TBD / TBD	SS / FP	NAVSEA	Mar 2018	May 2019	117	216.342	Y		
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4) (†)	✓	2018	TBD / TBD	SS / FP	NAVSEA	Mar 2018	May 2019	8	264.500	Y		
(†) indicates the presence of a P-21 Footnotes: (4) Increase in Block IA ECP costs from FY 2016 to FY 2017 is due to increasing quantities of ECPs to be incorporated. Further detail can be provided at a higher classification level. (5) Production cut-in decision for the Engineering Change Proposal (ECP) for the SM-6 Block IA configuration was included in the FY 2015 SM-6 Production Contract. The ECP cost line shown here is additional cost required to implement the ECP and procure the maximum number of SM-6 Block IA All Up Rounds (AURs), limited by maximum production rate. The Navy will procure SM-6 Block I and SM-6 Block IA missiles, not to exceed the quantities shown here. Increase in Block IA ECP costs from FY 2016 to FY 2017 is due to increasing quantities of ECPs to be incorporated. Further detail can be provided at a higher classification level. (6) MSR reflects a ramp up to a stable production rate for SM-6 Block IA.												

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2234 / Standard Missile															Item Number / Title [DODIC]: 1 / STANDARD MISSILE										
Cost Elements <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		
1.1.3) SM-6 Block I/IA All Up Round Missile ⁽²⁾																																
	1	2018	NAVY	117	0	117																						117				
✓	1	2018	NAVY	8	0	8																						8				
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4)																																
Prior Years Deliveries: 504																																
	3	2014	NAVY	93	0	93													A -	-	-	-	-	-	-	-	-	-	-	-	-	93
	4	2015	NAVY	95	0	95																						95				
	4	2016	NAVY	101	0	101																						101				
	4	2017	NAVY	125	0	125																						125				
	2	2018	NAVY	117	0	117																						117				
✓	2	2018	NAVY	8	0	8	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	8	

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2234 / Standard Missile													Item Number / Title [DODIC]: 1 / STANDARD MISSILE													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2015												Fiscal Year 2016												BALANCE					
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015												Calendar Year 2016																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						
1.1.3) SM-6 Block I/IA All Up Round Missile ⁽²⁾																																				
	1	2018	NAVY		117	0	117																					117								
✓	1	2018	NAVY		8	0	8																					8								
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4)																																				
Prior Years Deliveries: 504																																				
	3	2014	NAVY		93	0	93	-	-	-	-	-	-	-	-	-	10	12	12	12	12	12	12	11						0						
	4	2015	NAVY		95	0	95						A	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	8	8	8	56				
	4	2016	NAVY		101	0	101																A			-	-	-	-	-	-	-	-	-	-	101
	4	2017	NAVY		125	0	125																					125								
	2	2018	NAVY		117	0	117																					117								
✓	2	2018	NAVY		8	0	8																					8								
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2234 / Standard Missile													Item Number / Title [DODIC]: 1 / STANDARD MISSILE														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017											Fiscal Year 2018														BALANCE					
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEP PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017											Calendar Year 2018																			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							
1.1.3) SM-6 Block I/IA All Up Round Missile ⁽²⁾																																					
	1	2018	NAVY		117	0	117															A -	-	-	-	-	-	-	117								
✓	1	2018	NAVY		8	0	8															A -	-	-	-	-	-	-	8								
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4)																																					
Prior Years Deliveries: 504																																					
	3	2014	NAVY		93	93	0																												0		
	4	2015	NAVY		95	39	56	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9											0			
	4	2016	NAVY		101	0	101	-	-	-	-	-	-	7	8	8	8	8	8	9	9	9	9	9	9											0	
	4	2017	NAVY		125	0	125	A -					-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	75						
	2	2018	NAVY		117	0	117															A -	-	-	-	-	-	-	-	-	-	-	-	-	117		
✓	2	2018	NAVY		8	0	8															A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							

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LI 2234 - Standard Missile
Navy

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2234 / Standard Missile													Item Number / Title [DODIC]: 1 / STANDARD MISSILE									
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2021										Fiscal Year 2022													BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021										Calendar Year 2022															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP	
1.1.3) SM-6 Block I/IA All Up Round Missile ⁽²⁾																																
	1	2018	NAVY		117	57	60	10	10	10	10	10	10														0					
✓	1	2018	NAVY		8	6	2	1	1																		0					
1.1.4) FE002 Canister - SM-6 Block I/IA (Mk 21 Mod 3/Mod 4)																																
Prior Years Deliveries: 504																																
	3	2014	NAVY		93	93	0																				0					
	4	2015	NAVY		95	95	0																				0					
	4	2016	NAVY		101	101	0																				0					
	4	2017	NAVY		125	125	0																				0					
	2	2018	NAVY		117	117	0																				0					
✓	2	2018	NAVY		8	8	0	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	0

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2					P-1 Line Item Number / Title: 2234 / Standard Missile				Item Number / Title [DODIC]: 1 / STANDARD MISSILE			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 CO ⁽⁶⁾ - Tucson AZ	125	125	200	3	3	24	27	3	3	24	27
2	TBD - TBD	125	125	200	3	8	14	22	3	8	14	22
3	BAE-FY2014 - Minneapolis, MN	125	125	200	3	8	20	28	3	8	20	28
4	BAE - Minneapolis, MN	125	125	200	3	8	14	22	3	8	14	22

"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:

⁽⁶⁾ MSR reflects a ramp up to a stable production rate for SM-6 Block IA.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)					
ID Code (A=Service Ready, B=Not Service Ready): B				Program Elements for Code B Items: 0204162N				Other Related Program Elements: 0604329N				
Line Item MDAP/MAIS Code: 439												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	90	-	90	750	750	750	750	1,910	5,000
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	20.968	0.000	20.968	92.148	121.619	117.743	120.101	301.856	774.435
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	20.968	0.000	20.968	92.148	121.619	117.743	120.101	301.856	774.435
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	20.968	0.000	20.968	92.148	121.619	117.743	120.101	301.856	774.435
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	232,977.78	-	232,977.78	122,864.00	162,158.67	156,990.67	160,134.67	158,039.79	154,887.00

Description:

Small Diameter Bomb Increment II (SDB II) is an ACAT 1D program providing the warfighter a capability to attack mobile targets in all weather. The Air Force (USAF) is the lead service. SDB II addresses the following warfighter requirements: attack mobile targets; multiple kills per pass; multiple ordnance carriage; all weather operations; near-precision munitions capability; capability against fixed targets; reduced munitions footprint; increased weapons effectiveness; minimized potential for collateral damage; reduced susceptibility of munitions to countermeasures; and a migration path to net centric ops capability.

Threshold aircraft is the F-15E for the USAF and F-35B and F-35C for the Department of Navy (DON). Objective aircraft include the F/A-22, B-1, B2, F-117, F-16, B-52, Predator B, F/A-18 E/F. Milestone C was achieved June 2015.

The Acquisition Decision Memorandum was signed 4 June 2015. Lots 1 through 3 are Air Force only procurements; Lot 1 awarded 12 June 2015. Utilizing the Joint Miniature Munitions Bomb Rack Unit (JMM BRU), SDB II will be integrated on DON tactical fighter aircraft (F/A-18 E/F and F-35B/F35C) to deliver multi-mode moving target capability to the warfighter. F/A-18 E/F Initial Operational Capability (IOC) is planned for FY 2020; F-35 IOC is planned for FY 2022. The DON SDB II inventory objective is 5,000 weapons.

FY 2018 is the first year for procurement of SDB II for Navy.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)				
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: 0204162N			Other Related Program Elements: 0604329N				
Line Item MDAP/MAIS Code: 439										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Small Diameter Bomb II (SDB II)	P-5a, P-21			- / 0.000	- / 0.000	- / 0.000	90 / 20.968	- / 0.000	90 / 20.968
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	- / 0.000	90 / 20.968	- / 0.000	90 / 20.968
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

Justification:

FY 2018 provides funding to procure 90 SDB II All Up Rounds (AUR) to support warfighter requirements as well as containers, Government In-house (GIH) production support, software updates, weapon load crew trainers (WLCT), practical EOD systems trainers (PESTs), integrated logistics support, and peculiar support equipment. This program is a new start for Navy.

Current contract for Production Lots/Service includes the following:

- Lot 1 - USAF (144)
- Lot 2 - USAF (250)
- Lot 3 - USAF (312)
- Lot 4 - USAF (460) / USN (90)
- Lot 5 - USAF (300) / USN (750)

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)						Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			90			-			90		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				0.000			0.000			0.000			20.968			0.000			20.968		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				0.000			0.000			0.000			20.968			0.000			20.968		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				0.000			0.000			0.000			20.968			0.000			20.968		
(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>				-			-			-			232,977.78			-			232,977.78		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - SDBII Cost																					
Recurring Cost																					
1.1.1) All Up Round (AUR) ⁽¹⁾ (1)	-	-	-	-	-	-	-	-	-	122,988.89	90	11.069	-	-	-	122,988.89	90	11.069			
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	11.069	-	-	-	-	-	11.069			
Subtotal: Hardware - SDBII Cost	-	-	-	-	-	-	-	-	-	-	-	11.069	-	-	-	-	-	11.069			
Hardware - Nonrecurring and Ancillary Equip Cost																					
Non Recurring Cost																					
2.1.1) Containers ⁽²⁾	-	-	-	-	-	-	-	-	-	-	-	0.369	-	-	-	-	-	0.369			
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	0.369	-	-	-	-	-	0.369			
Subtotal: Hardware - Nonrecurring and Ancillary Equip Cost	-	-	-	-	-	-	-	-	-	-	-	0.369	-	-	-	-	-	0.369			
Support - Procurement Support Cost																					
3.1) GIH Production Support ⁽³⁾	-	-	-	-	-	-	-	-	-	-	-	4.286	-	-	-	-	-	4.286			
3.3) Software Updates ⁽⁴⁾	-	-	-	-	-	-	-	-	-	-	-	0.713	-	-	-	-	-	0.713			
Subtotal: Support - Procurement Support Cost	-	-	-	-	-	-	-	-	-	-	-	4.999	-	-	-	-	-	4.999			
Support - Fleet Support Cost																					
4.1) Weapon Load Crew Trainers (WLCT)	-	-	-	-	-	-	-	-	-	-	-	0.736	-	-	-	-	-	0.736			

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)							Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
4.2) Practical EOD Systems Trainers (PESTs) ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	-	0.122	-	-	-	-	-	0.122
4.3) Integrated Logistics Support (ILS)	-	-	-	-	-	-	-	-	-	-	-	1.115	-	-	-	-	-	1.115
4.4) Peculiar Support Equipment	-	-	-	-	-	-	-	-	-	-	-	2.558	-	-	-	-	-	2.558
Subtotal: Support - Fleet Support Cost	-	-	-	-	-	-	-	-	-	-	-	4.531	-	-	-	-	-	4.531
Gross/Weapon System Cost	-	-	0.000	-	-	0.000	-	-	0.000	232,977.78	90	20.968	-	-	0.000	232,977.78	90	20.968

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

Footnotes:

- (1) Unit costs for FY 2018 are actual costs based on the FY 2015 USAF contract award. Procurement Lots 1-5 are contract options to the FY 2015 USAF contract award. ECO change from USAF PB 2017 budget is a result of adding the M-code and GPS mods to the SDB II All Up Rounds.
- (2) Costs for FY 2018 are actual contract costs. Containers are procured on a two bombs per container basis.
- (3) Government In-House (GIH) Production support is government labor in support of the production of the All Up Round to include engineering and logistics.
- (4) Software maintenance will be continuous and software updates will be performed every other year.
- (5) PEST is Practical Explosive Ordnance Disposal (EOD) System Trainers.

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)				Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)				
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) All Up Round (AUR) ^(†)		2018 ⁽⁶⁾	Raytheon CO / Tucson AZ	C / FPIF	Eglin AFB, FL	Jan 2018	Jul 2019	90	122,988.89	Y		

^(†) indicates the presence of a P-21

Footnotes:

⁽⁶⁾ Raytheon Missile Systems, Tucson, AZ is the prime contractor for this effort. FY 2018 is Lot 4; Lots 1-3 are Air Force only procurements.

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)										Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019													B A L A N C E			
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019																
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P		
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
	1	2018	NAVY	90	0	90				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	60
	1	2018	AF ^(‡)	460	0	460				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	39	39	343
	1	2018	Total	550	0	550				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	49	49	403
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)										Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)													
Cost Elements (Units in Each)							Fiscal Year 2020										Fiscal Year 2021													BALANCE			
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021																
							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) All Up Round (AUR) ⁽¹⁾																																	
	1	2018	NAVY	90	30	60	10	10	10	10	10	10	-	-	-																		0
	1	2018	AF ^(‡)	460	117	343	39	39	39	39	39	39	39	39	31																		0
	1	2018	Total	550	147	403	49	49	49	49	49	49	39	39	31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2					P-1 Line Item Number / Title: 2238 / Small Diameter Bomb II (SDB II)				Item Number / Title [DODIC]: 1 / Small Diameter Bomb II (SDB II)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 CO - Tucson AZ	200	300	1,000	0	4	18	22	0	4	18	22

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,475	90	120	60	-	60	60	60	76	90	-	2,031
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,056.805	75.354	95.557	58.587	0.000	58.587	59.009	60.461	72.924	83.202	834.487	2,396.386
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,056.805	75.354	95.557	58.587	0.000	58.587	59.009	60.461	72.924	83.202	834.487	2,396.386
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,056.805	75.354	95.557	58.587	0.000	58.587	59.009	60.461	72.924	83.202	834.487	2,396.386
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	716,477.97	837,266.67	796,308.33	976,450.00	-	976,450.00	983,483.33	1,008K	959,526.32	924,466.67	-	1,180K

Description:

Rolling Airframe Missile (RAM) is a high fire-power missile system used to defeat Anti-Ship Cruise Missiles (ASCMs), as well as other airborne threats. RAM is a surface-to-air missile with passive dual-mode radio frequency/infrared (RF/IR) guidance and an active-optical proximity and contact fuse. RAM has minimal shipboard control systems and is autonomous after launch. Effective against a wide spectrum of existing threats, RAM Block 1 IR upgrade incorporates IR "all-the-way-homing" to improve performance against evolving passive and active ASCMs. RAM Block 2 provides increased kinematic capability against highly maneuvering threats and improved RF detection against low probability of intercept threats. The RAM missile is fired from a RAM Guided Missile Launching System (GMLS) (MK-49), which holds 21 RAM rounds. RAM is also fired from the SeaRAM Anti-Ship Missile Defense System (MK-15 MOD 31-33) which holds 11 rounds.

COOPERATIVE AGREEMENTS:

RAM is a cooperative program with the Federal Republic of Germany. The U.S. and Federal Republic of Germany cooperatively produce Block 1 missiles, launchers, and Ordnance Alterations (ORDALTs) through the Block 1 production Memorandum Of Agreement (MOA), Amendment 2 signed on 28 September 2010. The Block 2 production Memorandum of Understanding (MOU) was signed on 19 March 2013 with the U.S and Federal Republic of Germany to cooperatively produce Block 2 missiles, launchers, and ORDALTs and continue to provide support for Block 1 configuration through FY 2013 - FY 2019.

[P5 / EF008 Block 2 Missile]: Provides funding to procure RAM Block 2 All Up Rounds (AUR). Telemetry hardware procurements added to hardware to support increased fleet training requirements.

[P5 / EF850 Component Improvement/DMS]: Provides RAM Design Agent engineering and technical support for component replacement and improvement. The RAM Guided Missile Round Pack (GMRP) is a build to print missile that includes commercial-off-the-shelf hardware. Support includes the development/review/approval/verification of production engineering change proposals and obsolescence mitigation efforts. This support is required to ensure that the build to print package continues to support the system performance specs as production matures. With Block 2 Developmental Testing/Operational Testing underway, initial production and testing additional component improvement requirements were identified. These requirements address software/firmware/hardware corrections of production start up issues and test flight concerns as well as GMRP reprogramming. Software baseline updates require formal qualification testing at the four software components (IR Processor, Evolved RF Processor, Control Section Processor and Guidance Processor) and All Up Round. It also requires each individual component piece of test equipment and the all up round test station to be updated with the software baseline. Funding also supports replacement of key components due to end of lifetime buy.

[P5 / EF957 Container]: Procures containers for transporting the GMRP.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles		P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)
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		
[P5 / EF830 Production Support]: Provides critical engineering and technical support of the production line and production test equipment. Efforts include the technical investigation and resolution of production issues, control and maintenance of the technical data package, resolution of test equipment issues, configuration management, reliability assessments, and safety. Production support is an annual requirement which supports all on-going production and is independent of contract award quantities. [P5 / EF860 Product Acceptance]: Funds field activity product acceptance efforts. [P5 / EF974 ILS]: Funds Integrated Logistics Support (ILS) efforts in support of production.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Rolling Airframe Missile (RAM)	P-5a, P-21			1,475 / 1,056.805	90 / 75.354	120 / 95.557	60 / 58.587	- / 0.000	60 / 58.587
P-40	Total Gross/Weapon System Cost				1,475 / 1,056.805	90 / 75.354	120 / 95.557	60 / 58.587	- / 0.000	60 / 58.587
*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.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

Justification:

The unit costs reflected in FY 2016 and FY 2017 reflect the negotiated and awarded FY 2016 / FY 2017 production contract.

FY 2018 funding has been realigned from RAM (WPN BLI 2242) to Ship Self Def (Engage: Hard Kill) (RDTEN PE 0604756N) and Ship Missile Support Equipment (OPN BLI 5231) to support RAM Block 2A Raid Engineering Change Proposal (ECP). The RAM Block 2 Raid ECP will provide an upgraded seeker and Missile-to-Missile Link (MML) capability to counter emerging complex raid threats.

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Exhibit P-5, Cost Analysis: FY 2018 Navy											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)						Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				1,475		90		120		60		-		60				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				1,056.805		75.354		95.557		58.587		0.000		58.587				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				1,056.805		75.354		95.557		58.587		0.000		58.587				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				1,056.805		75.354		95.557		58.587		0.000		58.587				
(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>				716,477.97		837,266.67		796,308.33		976,450.00		-		976,450.00				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - EF001 Block 1 Missile Cost																		
Recurring Cost																		
1.1.1) EF001 G&C	406,217.21	1,197	486.242	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) EF001 Propulsion	14,114.29	140	1.976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) EF001 Safe and Arm Device	3,407.14	140	0.477	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.4) EF001 Ordnance Pack	26,600.00	140	3.724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) EF001 Warhead	11,221.43	140	1.571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.6) EF001 Canisters	46,371.43	140	6.492	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.7) EF001 Block 1 GMRP ORDALTS	216,706.67	450	97.518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	598.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - EF001 Block 1 Missile Cost	-	-	598.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF002 Propulsion Cost																		
Recurring Cost																		
2.1.1) EF002 Propulsion	-	-	12.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	12.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - EF002 Propulsion Cost	-	-	12.364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF004 Safe and Arm Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)						Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Recurring Cost																		
3.1.1) EF004 Safe & Arm Device	-	-	2.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	2.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - EF004 Safe and Arm Cost	-	-	2.103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF005 Ordnance Pack Cost																		
Recurring Cost																		
4.1.1) EF005 Ordnance Pack	-	-	28.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	28.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - EF005 Ordnance Pack Cost	-	-	28.251	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF006 Warhead Cost																		
Recurring Cost																		
5.1.1) EF006 Warhead	-	-	7.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	7.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - EF006 Warhead Cost	-	-	7.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF007 Canister Cost																		
Recurring Cost																		
6.1.1) EF007 Canister	-	-	32.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	32.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - EF007 Canister Cost	-	-	32.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - EF008 Block 2 Missile Cost																		
Recurring Cost																		
7.1.1) EF008 G&C ^(†) (†)	550,992.81	278	153.176	526,233.33	90	47.361	493,831.03	120	59.260	569,333.33	60	34.160	-	-	-	569,333.33	60	34.160
7.1.2) EF008 Propulsion ^(†)	75,147.48	278	20.891	78,723.03	90	7.085	66,332.00	120	7.960	76,476.03	60	4.589	-	-	-	76,476.03	60	4.589
7.1.3) EF008 Safe and Arm Device ^(†)	22,602.56	156	3.526	7,307.52	90	0.658	7,299.69	120	0.876	8,416.02	60	0.505	-	-	-	8,416.02	60	0.505
7.1.4) EF008 Ordnance Pack ^(†)	87,628.21	156	13.670	54,022.22	90	4.862	50,433.07	120	6.052	58,145.72	60	3.489	-	-	-	58,145.72	60	3.489
7.1.5) EF008 Warhead ^(†)	32,807.69	156	5.118	28,765.76	90	2.589	28,734.91	120	3.448	33,129.28	60	1.988	-	-	-	33,129.28	60	1.988

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Exhibit P-5, Cost Analysis: FY 2018 Navy										Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)						Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
7.1.6) EF008 Canister ^(†)	96,974.36	156	15.128	44,887.43	90	4.040	44,233.30	120	5.308	51,014.48	60	3.061	-	-	-	51,014.48	60	3.061
Subtotal: Recurring Cost	-	-	211.509	-	-	66.595	-	-	82.904	-	-	47.792	-	-	-	-	-	47.792
Subtotal: Hardware - EF008 Block 2 Missile Cost	-	-	211.509	-	-	66.595	-	-	82.904	-	-	47.792	-	-	-	-	-	47.792
Hardware Cost																		
Recurring Cost																		
8.1.1) EF008 Telemeters ^(†)	26,525.00	40	1.061	31,250.00	24	0.750	41,000.00	33	1.353	28,000.00	20	0.560	-	-	-	28,000.00	20	0.560
8.1.2) EF008 Transportation	-	-	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	1.076	-	-	0.750	-	-	1.353	-	-	0.560	-	-	-	-	-	0.560
Subtotal: Hardware Cost	-	-	1.076	-	-	0.750	-	-	1.353	-	-	0.560	-	-	-	-	-	0.560
Hardware - EF850 Component Improvement/DMS Cost																		
Recurring Cost																		
9.1.1) EF850 Component Improvement ⁽²⁾	-	-	68.481	-	-	0.190	-	-	1.483	-	-	2.484	-	-	-	-	-	2.484
9.1.2) EF850 Diminishing Manufacturing Sources ⁽³⁾	-	-	8.463	-	-	3.025	-	-	2.414	-	-	2.297	-	-	-	-	-	2.297
Subtotal: Recurring Cost	-	-	76.944	-	-	3.215	-	-	3.897	-	-	4.781	-	-	-	-	-	4.781
Subtotal: Hardware - EF850 Component Improvement/ DMS Cost	-	-	76.944	-	-	3.215	-	-	3.897	-	-	4.781	-	-	-	-	-	4.781
Hardware - EF957 Container Cost																		
Recurring Cost																		
10.1.1) EF957 Container ^(†)	8,240.00	350	2.884	-	-	-	-	-	-	6,750.00	20	0.135	-	-	-	6,750.00	20	0.135
Subtotal: Recurring Cost	-	-	2.884	-	-	-	-	-	-	-	-	0.135	-	-	-	-	-	0.135
Subtotal: Hardware - EF957 Container Cost	-	-	2.884	-	-	-	-	-	-	-	-	0.135	-	-	-	-	-	0.135
Support - EF830 Production Support Cost																		
11.1) EF830 Production Support Contractor Engineering	-	-	33.475	-	-	2.317	-	-	3.983	-	-	2.404	-	-	-	-	-	2.404

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Exhibit P-5, Cost Analysis: FY 2018 Navy											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)						Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
11.2) EF830 Production Support Gov In-House Engineering	-	-	38.620	-	-	1.908	-	-	2.441	-	-	1.981	-	-	-	-	-	1.981
Subtotal: Support - EF830 Production Support Cost	-	-	72.095	-	-	4.225	-	-	6.424	-	-	4.385	-	-	-	-	-	4.385
Support - EF860 Product Acceptance Cost																		
12.1) EF860 Product Acceptance	-	-	4.991	-	-	0.310	-	-	0.398	-	-	0.322	-	-	-	-	-	0.322
Subtotal: Support - EF860 Product Acceptance Cost	-	-	4.991	-	-	0.310	-	-	0.398	-	-	0.322	-	-	-	-	-	0.322
Support - EF950 Tool & Test Equipment Cost																		
13.1) EF950 Tool & Test Equipment	-	-	1.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - EF950 Tool & Test Equipment Cost	-	-	1.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - EF974 ILS Cost																		
14.1) EF974 ILS ⁽⁴⁾	-	-	5.831	-	-	0.259	-	-	0.581	-	-	0.612	-	-	-	-	-	0.612
14.2) WAXXX Acquisition Workforce Fund 2009	-	-	0.347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - EF974 ILS Cost	-	-	6.178	-	-	0.259	-	-	0.581	-	-	0.612	-	-	-	-	-	0.612
Gross/Weapon System Cost	716,477.97	1,475	1,056.805	837,266.67	90	75.354	796,308.33	120	95.557	976,450.00	60	58.587	-	-	0.000	976,450.00	60	58.587
Remarks: [Support Cost] Additional efforts required to support DMS is driving the increase in production support for updating the technical data package (TDP). Production support is an annual requirement which supports all on-going production and is independent of contract award quantities. (†) indicates the presence of a P-5a Footnotes: (1) FY 2018 unit cost exceeds approved OMB / OSD inflation factor from FY 2017 due to quantity reduction from 120 to 60 missiles. (2) FY 2016 reflects a one time reduction of non-hardware efforts to facilitate award of 90 missiles. In FY 2017, costs are restored to normal levels. FY 2018 increases reflect risk of reducing Block 2 procurements below minimum sustaining rate (MSR). (3) DMS reflects normal levels of manufacturing obsolescence associated with Field-Programmable Gate Arrays (FPGA), flash drives, capacitors, resistors, inductors, diodes, adhesives, chemicals (rocket motor), materials (potting, fiberglass, printed circuit cards, alloys), etc. RAM also has a requirement for long term storage making it susceptible to tin whiskers. Therefore, many components require unique tin-lead alloy or lead coating to prevent this phenomenon. These components historically have recurring short time frame obsolescence issues. (4) FY 2016 reflects a one time reduction of non-hardware efforts to facilitate award of 90 missiles. In FY 2017 and FY 2018, costs are restored to normal levels.																		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)				Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)				
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
7.1.1) EF008 G&C ^(†)		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	497,909.09	Y		Jun 2012
7.1.1) EF008 G&C ^(†)		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	460,181.24	Y		Jun 2012
7.1.1) EF008 G&C ^(†)		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	526,233.33	Y		Feb 2014
7.1.1) EF008 G&C ^(†)		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	493,831.03	Y		Feb 2014
7.1.1) EF008 G&C ^(†)		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Dec 2019	60	569,333.33	Y		Feb 2016
7.1.2) EF008 Propulsion		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	83,151.52	Y		Feb 2013
7.1.2) EF008 Propulsion		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	68,606.49	Y		Feb 2013
7.1.2) EF008 Propulsion		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	78,723.03	Y		Feb 2015
7.1.2) EF008 Propulsion		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	66,332.00	Y		Feb 2015
7.1.2) EF008 Propulsion		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Dec 2019	60	76,476.03	Y		Feb 2016
7.1.3) EF008 Safe and Arm Device		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	16,621.21	Y		Feb 2013
7.1.3) EF008 Safe and Arm Device		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	6,472.31	Y		Feb 2013
7.1.3) EF008 Safe and Arm Device		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	7,307.52	Y		Feb 2015
7.1.3) EF008 Safe and Arm Device		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	7,299.69	Y		Feb 2015
7.1.3) EF008 Safe and Arm Device		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Dec 2019	60	8,416.02	Y		Feb 2016
7.1.4) EF008 Ordnance Pack		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	53,212.12	Y		Feb 2013
7.1.4) EF008 Ordnance Pack		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	47,247.87	Y		Feb 2013
7.1.4) EF008 Ordnance Pack		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	54,022.22	Y		Feb 2015
7.1.4) EF008 Ordnance Pack		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	50,433.07	Y		Feb 2015
7.1.4) EF008 Ordnance Pack		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Dec 2019	60	58,145.72	Y		Feb 2016
7.1.5) EF008 Warhead		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	16,075.76	Y		Feb 2013
7.1.5) EF008 Warhead		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	25,242.00	Y		Feb 2013
7.1.5) EF008 Warhead		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	28,765.76	Y		Feb 2015
7.1.5) EF008 Warhead		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	28,734.91	Y		Feb 2015
7.1.5) EF008 Warhead		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Dec 2019	60	33,129.28	Y		Feb 2016
7.1.6) EF008 Canister		2014	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Jun 2014	Jun 2016	66	66,515.15	Y		Feb 2013
7.1.6) EF008 Canister		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Feb 2015	Feb 2017	90	39,481.09	Y		Feb 2013
7.1.6) EF008 Canister		2016	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2015	Dec 2017	90	44,887.43	Y		Feb 2015
7.1.6) EF008 Canister		2017	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Dec 2018	120	44,233.30	Y		Feb 2015
7.1.6) EF008 Canister		2018	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Dec 2019	60	51,014.48	Y		Feb 2016
8.1.1) EF008 Telemeters		2015	NAWC China Lake / China Lake, CA	WR	CA	Feb 2015	May 2016	35	25,992.00	Y		
8.1.1) EF008 Telemeters		2016	NAWC China Lake / China Lake, CA	WR	CA	Oct 2015	Jan 2017	24	31,250.00	Y		
8.1.1) EF008 Telemeters		2017	NAWC China Lake / China Lake, CA	WR	CA	Oct 2016	Jan 2018	33	41,000.00	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)				Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)			

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
8.1.1) EF008 Telemeters		2018	NAWC China Lake / China Lake, CA	WR	CA	Oct 2017	Oct 2017	20	28,000.00	N		
10.1.1) EF957 Container		2014	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Feb 2015	Aug 2015	108	6,815.00	Y		Nov 2014
10.1.1) EF957 Container		2015	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Jul 2015	Jan 2016	93	6,967.74	Y		Nov 2014
10.1.1) EF957 Container		2018	NSWC Indian Head / Picatinny, NJ	C / FFP	NJ	Jan 2018	Jul 2018	20	6,750.00	Y		Jun 2017

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2									P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)										Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)																			
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2014										Fiscal Year 2015										BALANCE											
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014										Calendar Year 2015																					
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP							
7.1.1) EF008 G&C ⁽¹⁾																																						
Prior Years Deliveries: 122																																						
	1	2014	NAVY	66 ⁽⁵⁾	0	66											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66					
	1	2015	NAVY	90	0	90																					A -	-	-	-	-	-	-	-	-	-	-	90
	1	2016	NAVY	90	0	90																															90	
	1	2017	NAVY	120	0	120																															120	
	1	2018	NAVY	60 ⁽⁶⁾	0	60																															60	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP								

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017												
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)													Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)												
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					
7.1.1) EF008 G&C ⁽¹⁾																																			
Prior Years Deliveries: 122																																			
	1	2014	NAVY	66 ⁽⁵⁾	0	66	-	-	-	-	-	-	-	-	5	5	5	5	5	5	6	6	6	6	6	6					0				
	1	2015	NAVY	90	0	90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	8	7	8	7	8	7	8	30					
	1	2016	NAVY	90	0	90	A -			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90					
	1	2017	NAVY	120	0	120																A -	-	-	-	-	-	-	-	-	-	-	-	-	120
	1	2018	NAVY	60 ⁽⁶⁾	0	60																											60		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)										Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019													BALANCE					
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019																		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP				
7.1.1) EF008 G&C ⁽¹⁾																																			
Prior Years Deliveries: 122																																			
	1	2014	NAVY	66 ⁽⁵⁾	66	0																													0
	1	2015	NAVY	90	60	30	7	8	7	8																									0
	1	2016	NAVY	90	0	90	-	-	7	8	7	8	7	8	7	8	7	8														0			
	1	2017	NAVY	120	0	120	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	10	20					
	1	2018	NAVY	60 ⁽⁶⁾	0	60			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60					
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)										Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020										Fiscal Year 2021										BALANCE								
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021																		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP				
7.1.1) EF008 G&C ⁽¹⁾																																			
Prior Years Deliveries: 122																																			
	1	2014	NAVY		66 ⁽⁵⁾	66	0																										0		
	1	2015	NAVY		90	90	0																										0		
	1	2016	NAVY		90	90	0																										0		
	1	2017	NAVY		120	100	20																										10	10	0
	1	2018	NAVY		60 ⁽⁶⁾	0	60																										-	-	7
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2242 / Rolling Airframe Missile (RAM)				Item Number / Title [DODIC]: 1 / Rolling Airframe Missile (RAM)			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 CO - Tucson, AZ	90	240	480	0	3	24	27	0	3	24	27

"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:

⁽⁵⁾ With the late enactment of the FY 2014 Appropriations Act, the FY 2014 contract award date changed from December 2013 to June 2014 which caused deliveries to begin in June 2016 rather than December 2015.

⁽⁶⁾ There are no production gaps within the budget. RAM works with Raytheon to coordinate third party sales and cooperative German sales to prevent self inflicting production gaps.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)					
ID Code (A=Service Ready, B=Not Service Ready): B				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	96	-	-	-	73	75	192	192	5,388	6,016
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	26.200	3.789	0.000	3.789	24.374	24.379	49.872	50.869	1,375.405	1,554.888
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	26.200	3.789	0.000	3.789	24.374	24.379	49.872	50.869	1,375.405	1,554.888
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	26.200	3.789	0.000	3.789	24.374	24.379	49.872	50.869	1,375.405	1,554.888
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	272,916.67	-	-	-	333,890.41	325,053.33	259,750.00	264,942.71	255,271.90	258,458.78
Description: The Joint Air-to-Ground Missile (JAGM) is an air-launched missile system that will incorporate multi-mode seeker technology thus providing advanced Line-of-Sight and Beyond-Line-of-Sight precision fire and-forget seeker targeting capabilities resulting in increased lethality against soft, hardened, moving, stationary, land and maritime threats. JAGM improves the warfighter's capability in adverse weather, day or night, and in obscured/countermeasure environments. The JAGM Increment 1 system will replace aviation-launched, Tube-launched, Optically-tracked, Wire-guided (TOW) missile, and Helicopter Launched Fire-&-Forget (HELLFIRE) Missile System. JAGM is an Army-led joint program that addresses rotary wing fixed wing and unmanned aerial vehicle requirements. The Department of Navy threshold platform is the AH-1Z. The JAGM system includes missile, trainers, container, support equipment and software modifications to the M-299 launcher. Justification: The Department of Navy total procurement for Joint Air-to-Ground Missile is 6,016 missiles. Milestone C has been deferred from 3QTR2017 to 3QTR2018 due to delayed missile delivers for the Engineering and Manufacturing Development (EMD) which is a direct result of low factory yield and test throughput at the component level due to the cumulative effect of minor issues transitioning to production and has been corrected. Therefore, FY 2017 and FY 2018 funding will be used to procure the JAGM Low Rate Initial Production (LRIP) buy of 96 missiles, Other Production Support (OPS), training missiles, production related engineering and logistics to support the LRIP procurement buy in order to meet the Initial Operating Capability.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2254 / Hellfire					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	6,474	-	100	-	110	110	-	-	-	-	-	6,684
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,035.955	0.000	8.600	0.000	8.771	8.771	0.000	0.000	0.000	0.000	-	1,053.326
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,035.955	0.000	8.600	0.000	8.771	8.771	0.000	0.000	0.000	0.000	-	1,053.326
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,035.955	0.000	8.600	0.000	8.771	8.771	0.000	0.000	0.000	0.000	-	1,053.326
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	136,299.04	-	75,200.00	-	69,727.27	69,727.27	-	-	-	-	-	134,289.35
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	160,017.76	-	86,000.00	-	79,736.36	79,736.36	-	-	-	-	-	157,589.17
Description: AGM-114 Hellfire is a family of laser guided missiles employed against point and moving targets by both rotary and fixed wing aircraft. The family of Hellfire missiles includes, but is not limited to, AGM-114B/K/ K2/K2A/M/N/N-5/P/P+/Q/Q6 variants. These variants include shaped charge warheads for use against armored targets and blast fragmentation warheads for use against urban structures. The AGM-114N is a thermobaric blast fragmentation warhead that maintains the capability provided by the AGM-114M while adding a unique capability against confined compartmented spaces, a typical target type observed in current combat operations. Other variants include the K2A, which has a blast frag sleeve for use against soft-skinned tactical vehicles, the N5, which provides a trajectory shaping capability to increase endgame lethality against vertical structures, and the P/P+ variants, which include high altitude launch trajectories for use from fixed-wing aircraft. Additionally, the Q and Q6 variants have inert warheads, which are used for training on ranges that do not allow live warheads, and to preserve tactical missiles for use in combat. Conversions from one variant to another are done on an as needed basis. Prior year funding includes Hellfire, Viper Strike, and Griffin.												
Justification: OCO: From 1 October 2014 through 30 September 2015, 110 Hellfire training missiles were expended to support Overseas Contingency Operations (OCO). Pre-Deployment training for OCO includes Hellfire training shots to gain proficiency for aircrew and Joint Terminal Attack Controllers (JTACs). Without replenishment of these assets, aircrew and JTAC readiness for combat operations will be reduced.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2255 / Laser Maverick					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	74.485	0.000	20.000	0.000	5.040	5.040	0.000	0.000	0.000	0.000	-	99.525
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	74.485	0.000	20.000	0.000	5.040	5.040	0.000	0.000	0.000	0.000	-	99.525
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	74.485	0.000	20.000	0.000	5.040	5.040	0.000	0.000	0.000	0.000	-	99.525
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The AGM-65 Maverick is a tactical, air-to-surface, guided missile designed for close-air support, interdiction and defense suppression missions. It also provides stand-off capability and high strike probability against a wide range of tactical targets, including high-speed moving targets, armor, air defenses, ships, transportation equipment and fuel storage facilities. The AGM-65E2 is a joint effort by the Navy and Air Force to modernize this capability with an enhanced laser seeker and new software that reduces the risk of collateral damage. The AGM-65E2 is a modification to the Maverick's Guidance and Control Section (GCS) to incorporate modern components which are a suitable replacement for the obsolete components of the existing AGM-65E.

Justification:

OCO:
Between FY 2000 and FY 2013 the Navy expended Laser Maverick missiles in Afghanistan and Iraq. Between August 2014 and December 2015 additional Laser Mavericks have been expended in support of Operation Inherent Resolve. FY 2018 OCO funding will procure Laser Maverick modification kits to convert AGM-65F Infra-Red Mavericks in existing inventory to AGM-65E2 Mavericks.

As the only existing Navy Fixed Wing Air to Ground weapon suitable for engagement of fast-moving, maneuvering ground targets, the AGM-65E Laser Maverick has been heavily expended during Global War on Terrorism (GWOT)/OCO despite having been out of production since 1991. This Maverick modification kit effort will address those capacity shortfalls due to a limited and rapidly diminishing Laser Maverick inventory.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2264 / Stand Off Precision Guided Munitions (SOPGM)					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	391	17	24	19	-	19	15	-	-	-	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	47.310	3.091	3.316	3.122	0.000	3.122	2.632	0.000	0.000	0.000	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	47.310	3.091	3.316	3.122	0.000	3.122	2.632	0.000	0.000	0.000	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	47.310	3.091	3.316	3.122	0.000	3.122	2.632	0.000	0.000	0.000	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	109,867.01	120,000.00	122,416.67	124,842.11	-	124,842.11	127,333.33	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	120,997.44	181,823.53	138,166.67	164,315.79	-	164,315.79	175,466.67	-	-	-	Continuing	Continuing
Description: Stand Off Precision Guided Munition (SOPGM) weapon, Griffin Missile, is the threshold weapon for the KC-130J Intelligence, Surveillance and Reconnaissance (ISR) Weapon Mission Kit USMC requirement. This weapon satisfies a portion of the required roll-on/roll-off capability inherent in the ISR Weapon Mission Kit. Griffin is a rocket propelled missile and uses the Global Positioning System/Inertial Navigation System (GPS/INS) to navigate to the target vicinity and a semi-active laser (SAL) seeker for terminal guidance to target impact. The Griffin will be used on KC130J (Alpha variant) and Cyclone class Patrol Coastal (PC) ships (Bravo variant). The Griffin Alpha variant is an air launched missile and the Bravo variant is a ship launched missile.												
Justification: Griffin Missile base funding is required to support Griffin Missile System Rapid Deployment Capability (RDC) program for the Patrol Coastal (PC) ships. The RDC provides an anti-surface missile capability to improve the ship's ability to defend against enemy small boat attacks. FY 2018 base funding procures 19 Griffin Bravo variant missiles.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2280 / Aerial Targets

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,623.633	40.462	137.484	124.757	0.000	124.757	128.404	131.952	212.543	162.769	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,623.633	40.462	137.484	124.757	0.000	124.757	128.404	131.952	212.543	162.769	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,623.633	40.462	137.484	124.757	0.000	124.757	128.404	131.952	212.543	162.769	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>)	-	0.335	1.316	6.051	-	6.051	1.594	4.372	3.792	4.164	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Aerial Targets program provides threat representative aerial targets for the test and evaluation (T&E) and fleet training events. Assets procured under this line item are used to simulate and replicate currently fielded subsonic and supersonic Anti-Ship Cruise Missile (ASCM) threats. The threat representative targets are used to test and evaluate Navy ship self-defense systems currently in development, and are required for the successful completion of independent operational test and evaluation prior to fielding the systems to the fleet. Some variants are also used as Fleet Training assets to support fleet readiness. This program is composed of four primary components: (1) Subsonic targets, (2) the Multi-Stage Supersonic Target (MSST), (3) Other Targets, and (4) Auxiliary/Augmenting Systems.

(1) Subsonic targets

The Subsonic targets program is composed of continuing subsonic production/modification programs to include the BQM-177A Subsonic Aerial Target (SSAT) and avionics upgrade kits for the BQM-34S (BQM Target Modification). The BQM-177A SSAT provides dynamic, high-subsonic, sea-skimming, anti-ship cruise missile threat emulation for testing of USN ship defensive weapon systems and other surface-to-air systems and will replace current BQM-74E subsonic targets with increased capabilities. The BQM-34S is a jet-powered, high subsonic speed aerial target and the modification effort allows for the continued utilization of current BQM-34S inventories which are required to quickly mitigate critical subsonic inventory shortfall(s) to support Fleet Live-Fire training until the BQM-177A SSAT is fielded. Assets may be recovered and reused depending on the objectives of the event. Other subsonic targets include the BQM-74 and various Unmanned Aerial Vehicle (UAV) platforms to replicate emerging UAV threats.

(2) MSST

The GQM-173A Multi Stage Supersonic Target (MSST) procurement program was terminated in FY 2015.

(3) Other Targets

The Other Targets program is composed of a continuing powered supersonic target production/modification program, the GQM-163A Supersonic Sea Skimming Target (SSST). The SSST is a non-recoverable supersonic sea skimming aerial target, capable of speeds in excess of Mach 2.5 and cruise altitudes from 15 to 66 ft. SSST replicates a family of supersonic sea skimming, anti-ship cruise missile threats to meet critical test and evaluation requirements of USN ship self-defense systems. Additionally, SSST has successfully demonstrated a higher altitude diving threat profile capability. Funding may also be used to procure other supersonic targets in support of unique and emerging threat simulations.

(4) Aux/Aug System Targets

The Auxiliary/Augmenting Systems includes various procurements of target ground control systems required to safely operate all aerial targets and threat simulator(s) payloads that replicate electronic attack and active emitters found on current threat missiles. The Target Mission Support Systems program provides target control and scoring, location, and navigation of targets for Fleet training and weapons systems

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles		P-1 Line Item Number / Title: 2280 / Aerial Targets
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 test and evaluation. The Target Threat Simulation Program, installed on subsonic or supersonic targets as required, replicates various threats dependent upon the objectives of the test and evaluation event(s). When the target is destroyed, these assets are consumed and require replacement. As requirements to establish readiness capability increase, it is critical to maintain sufficient inventory of the Auxiliary/ Augmenting Systems & Target Threat Simulation devices. Avionics equipment, common to all aerial targets, is also procured under Aux/Aug System Targets.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2280 / Aerial Targets				
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Subsonic	P-5a, P-21			- / 702.843	- / 0.800	- / 36.591	- / 39.783	- / 0.000	- / 39.783
P-5	2 / MSST				- / 0.967	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-5	3 / Other Targets [Other]	P-5a, P-21			- / 511.262	- / 26.457	- / 88.228	- / 66.943	- / 0.000	- / 66.943
P-5	4 / Aux / Aug System Targets				- / 2,408.561	- / 13.205	- / 12.665	- / 18.031	- / 0.000	- / 18.031
P-40	Total Gross/Weapon System Cost				- / 3,623.633	- / 40.462	- / 137.484	- / 124.757	- / 0.000	- / 124.757
*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. Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: Subsonic FY 2018 funding is required to support procurement of Low Rate Initial Production (LRIP) Lot II BQM-177A Subsonic Aerial Targets, as well as associated kits and equipment. Funds also support continued procurement/installation of avionics upgrade kits for modification to the BQM-34S targets and other subsonic target hardware. Other Targets FY 2018 funding is required for the procurement, production, and modification of supersonic targets. Funds will support execution of the GQM-163A Supersonic Sea Skimming Target (SSST) Full Rate Production (FRP) 12 contract and other supersonic targets. Aux/Aug System Targets FY 2018 funding is required for Auxiliary/Augmenting Systems to continue production of various target command and control systems, scoring equipment, location, identification, and navigation equipment required to safely operate all aerial targets. The targets require production of various threat simulator(s) payloads that provide affordable high fidelity simulation environments of foreign threat electronic attack and threat radar emissions. Target threat simulation requires various electronic countermeasures equipment and active emitter augmentation equipment. Increase for ECM/Emitter Equipment and Target Common Avionics Equipment to fund required procurements needed for target ground control systems and threat simulator payloads to meet increased fleet operations.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity:						P-1 Line Item Number / Title:						Item Number / Title [DODIC]:						
1507N / 02 / 2						2280 / Aerial Targets						1 / Subsonic						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				702.843		0.800		36.591		39.783		0.000		39.783				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				702.843		0.800		36.591		39.783		0.000		39.783				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				702.843		0.800		36.591		39.783		0.000		39.783				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-		-		-		-		-		-				
Gross/Weapon System Unit Cost (\$ in Thousands)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Flyaway - Subsonic Target Hardware Cost																		
Recurring Cost																		
1.1.1) EM030 BQM-74E	-	-	73.895	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) EM031 BQM-177A ^(†) (1)	-	-	0.000	-	-	0.000	795.354	31	24.656	636.288	45	28.633	-	-	0.000	636.288	45	28.633
1.1.3) EM441 Install/ Mission Kits ⁽²⁾	-	-	11.684	-	-	0.000	-	-	5.703	-	-	4.734	-	-	0.000	-	-	4.734
1.1.4) EM452 BQM Target Modification	-	-	5.843	-	-	0.297	-	-	0.273	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	91.422	-	-	0.297	-	-	30.632	-	-	33.367	-	-	0.000	-	-	33.367
Subtotal: Flyaway - Subsonic Target Hardware Cost	-	-	91.422	-	-	0.297	-	-	30.632	-	-	33.367	-	-	0.000	-	-	33.367
Flyaway - Subsonic Targets Nonrecurring & Ancillary Equipment Cost																		
Non Recurring Cost																		
2.1.1) EM540 Technical Support	-	-	1.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	1.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Flyaway - Subsonic Targets Nonrecurring & Ancillary Equipment Cost	-	-	1.427	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Flyaway - Subsonic Target Launch Hardware Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 1 / Subsonic						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Recurring Cost																		
3.1.1) EM701 Subsonic Ground Equipment ⁽³⁾	-	-	6.347	-	-	0.000	-	-	3.870	-	-	3.594	-	-	0.000	-	-	3.594
Subtotal: Recurring Cost	-	-	6.347	-	-	0.000	-	-	3.870	-	-	3.594	-	-	0.000	-	-	3.594
Subtotal: Flyaway - Subsonic Target Launch Hardware Cost	-	-	6.347	-	-	0.000	-	-	3.870	-	-	3.594	-	-	0.000	-	-	3.594
Flyaway - Subsonic FY06 and PRIOR Cost																		
Non Recurring Cost																		
4.1.1) FY06 and Prior Subsonic	-	-	594.445	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	594.445	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Flyaway - Subsonic FY06 and PRIOR Cost	-	-	594.445	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - Subsonic Production Support Cost																		
5.1) EM851 Subsonic Production Engineering Support ⁽⁴⁾	-	-	7.323	-	-	0.503	-	-	1.082	-	-	1.462	-	-	0.000	-	-	1.462
5.2) EM861 Subsonic Integrated Logistic Support	-	-	1.543	-	-	0.000	-	-	0.707	-	-	1.060	-	-	0.000	-	-	1.060
5.3) EM871 Subsonic Documentation	-	-	0.336	-	-	0.000	-	-	0.300	-	-	0.300	-	-	0.000	-	-	0.300
Subtotal: Support - Subsonic Production Support Cost	-	-	9.202	-	-	0.503	-	-	2.089	-	-	2.822	-	-	0.000	-	-	2.822
Gross/Weapon System Cost	-	-	702.843	-	-	0.800	-	-	36.591	-	-	39.783	-	-	0.000	-	-	39.783
(†) indicates the presence of a P-5a																		
Footnotes:																		
(1) EM031 BQM-177A Initial Operational Capability (IOC) is planned for 4QFY 2018. The production contract is sole source Firm, Fixed Price (FFP) with pre-negotiated priced LRIP 1 (FY 2017) & 2 (FY 2018) assets.																		
(2) EM441 Install/Mission Kits: BQM-177A Mission Kits are required to support fleet operations and are used to replicate various threats. Kits are not procured on a one for one basis with the air vehicle, however, kit quantities are proportional to the number of targets being procured. The quantities and types of kits varies each year, based on projected Test & Evaluation requirements which results in some fluctuations in funding requirements.																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 1 / Subsonic
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(3) EM701 Subsonic ground equipment includes peculiar support equipment and flight presentation consumables. (4) EM851 Subsonic production support cost prior years represents accumulated costs prior to FY 2016 in support of the BQM-74E and BQM-34S programs. Commencing in FY 2017, the support costs also includes the BQM-177A target.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2280 / Aerial Targets				Item Number / Title [DODIC]: 1 / Subsonic				
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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) EM031 BQM-177A ^(†)		2017 ⁽⁵⁾	CEI / Sacramento, CA / CEI	SS / FFP	NAVAIR	Jun 2017	Jun 2018	31	795.354	Y		Apr 2017
1.1.2) EM031 BQM-177A ^(†)		2018 ⁽⁶⁾	CEI / Sacramento, CA / CEI	SS / FFP	NAVAIR	Jan 2018	Jan 2019	45	636.288	Y		Nov 2017

^(†) indicates the presence of a P-21

Footnotes:

⁽⁵⁾ The FY 2017 & FY 2018 procurement contracts are pre-negotiated options on the current Engineering and Manufacturing Development (EMD) contract. The RFP Issue date refers to release of a Letter of Intent to exercise these options.

⁽⁶⁾ The FY 2017 & FY 2018 procurement contracts are pre-negotiated options on the current Engineering and Manufacturing Development (EMD) contract. The RFP Issue date refers to release of a Letter of Intent to exercise these options.

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2280 / Aerial Targets													Item Number / Title [DODIC]: 1 / Subsonic																											
Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018													BALANCE															
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018																												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																	
1.1.2) EM031 BQM-177A ⁽¹⁾																																															
	1	2017	NAVY	31	0	31													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	5	5	5	11									
	1	2018	NAVY	45	0	45													A -													-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P																	

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2280 / Aerial Targets										Item Number / Title [DODIC]: 1 / Subsonic													
Cost Elements (Units in Each)							Fiscal Year 2019										Fiscal Year 2020														BALANCE		
O C C O	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			
1.1.2) EM031 BQM-177A ⁽¹⁾																																	
	1	2017	NAVY	31	20	11	3	3	3	2																							0
	1	2018	NAVY	45	0	45	-	-	-	3	3	3	4	4	4	4	4	4	4	4													0
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2					P-1 Line Item Number / Title: 2280 / Aerial Targets					Item Number / Title [DODIC]: 1 / Subsonic			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	CEI / Sacramento, CA - CEI	30	45	70	0	9	12	21	0	4	12	16	

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 2 / MSST								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				0.967			0.000			0.000			0.000			0.000			0.000		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				0.967			0.000			0.000			0.000			0.000			0.000		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				0.967			0.000			0.000			0.000			0.000			0.000		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>				-			-			-			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)			
Flyaway - MSST Target Hardware Cost																					
Recurring Cost																					
1.1.1) EMA01 GQM-173A (MSST) ⁽⁷⁾	-	-	0.967	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Recurring Cost	-	-	0.967	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Subtotal: Flyaway - MSST Target Hardware Cost	-	-	0.967	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Gross/Weapon System Cost	-	-	0.967	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
Footnotes:																					
⁽⁷⁾ EMA01: The Navy canceled development of the GQM-173A Multi-Stage Supersonic Target (MSST) program and notified the Congress on September 25, 2015. All other GQM-173A (MSST) procurement cost elements that did not incur any prior year costs have been zeroed with the termination of the program.																					

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Exhibit P-5, Cost Analysis: FY 2018 Navy														Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 3 / Other Targets [Other]						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				511.262		26.457		88.228		66.943		0.000		66.943				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				511.262		26.457		88.228		66.943		0.000		66.943				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				511.262		26.457		88.228		66.943		0.000		66.943				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-		-		-		-		-		-				
Gross/Weapon System Unit Cost (\$ in Thousands)				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Flyaway - Other Targets Hardware Cost																		
Recurring Cost																		
1.1.1) EM100 TDU-32 Tow Targets	-	-	1.071	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) EM203 GQM-163A (SSST) ^(†) ₍₈₎	2,663.950	80	213.116	4,410.000	5	22.050	3,328.667	24	79.888	3,543.706	17	60.243	-	-	0.000	3,543.706	17	60.243
Subtotal: Recurring Cost	-	-	214.187	-	-	22.050	-	-	79.888	-	-	60.243	-	-	0.000	-	-	60.243
Subtotal: Flyaway - Other Targets Hardware Cost	-	-	214.187	-	-	22.050	-	-	79.888	-	-	60.243	-	-	0.000	-	-	60.243
Flyaway - Hardware-Other Targets Cost																		
Recurring Cost																		
2.1.1) EM422 Product Improvement	-	-	3.975	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
2.1.2) EM442 Install/ Mission Kits ⁽⁹⁾	-	-	16.535	-	-	1.624	-	-	2.920	-	-	2.150	-	-	0.000	-	-	2.150
Subtotal: Recurring Cost	-	-	20.510	-	-	1.624	-	-	2.920	-	-	2.150	-	-	0.000	-	-	2.150
Subtotal: Flyaway - Hardware-Other Targets Cost	-	-	20.510	-	-	1.624	-	-	2.920	-	-	2.150	-	-	0.000	-	-	2.150
Flyaway - Other Targets Launch Hardware Cost																		
Recurring Cost																		
3.1.1) EM702 Ground Equipment	-	-	3.545	-	-	0.000	-	-	1.910	-	-	1.040	-	-	0.000	-	-	1.040

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 3 / Other Targets [Other]						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Subtotal: Recurring Cost	-	-	3.545	-	-	0.000	-	-	1.910	-	-	1.040	-	-	0.000	-	-	1.040
Subtotal: Flyaway - Other Targets Launch Hardware Cost	-	-	3.545	-	-	0.000	-	-	1.910	-	-	1.040	-	-	0.000	-	-	1.040
Flyaway - GQM-163A Long Lead Item Cost																		
Recurring Cost																		
4.1.1) Long Lead Credit	-	-	-3.157	-	-	-0.240	-	-	-0.740	-	-	-0.600	-	-	0.000	-	-	-0.600
4.1.2) Long Lead Components ⁽¹⁰⁾	-	-	3.157	-	-	0.740	-	-	0.600	-	-	0.570	-	-	0.000	-	-	0.570
Subtotal: Recurring Cost	-	-	0.000	-	-	0.500	-	-	-0.140	-	-	-0.030	-	-	0.000	-	-	-0.030
Subtotal: Flyaway - GQM-163A Long Lead Item Cost	-	-	0.000	-	-	0.500	-	-	-0.140	-	-	-0.030	-	-	0.000	-	-	-0.030
Flyaway - Other Targets FY06 and PRIOR Cost																		
Non Recurring Cost																		
5.1.1) Non Recurring Cost	-	-	245.008	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	245.008	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Flyaway - Other Targets FY06 and PRIOR Cost	-	-	245.008	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - Other Targets Support Cost																		
6.1) EM852 Production Engineering Support	-	-	28.012	-	-	2.283	-	-	3.650	-	-	3.540	-	-	0.000	-	-	3.540
Subtotal: Support - Other Targets Support Cost	-	-	28.012	-	-	2.283	-	-	3.650	-	-	3.540	-	-	0.000	-	-	3.540
Gross/Weapon System Cost	-	-	511.262	-	-	26.457	-	-	88.228	-	-	66.943	-	-	0.000	-	-	66.943

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

Footnotes:

⁽⁸⁾ EM203 GQM-163A: The increase in GQM-163A Target quantities is necessary in order to meet the operational demand. The Navy has increased fleet test requirements for ships self defense systems that require GQM-163A Targets and weapons systems: CVN 78(RAM), LCS (SeaRAM), DDG 1000(SM-2), ESSM (SM-2), E2D (APY9), JSF(AIM-120) have impending test operations that are depending on the GQM-163A Targets. The FY 2018 unit cost increased from FY 2017 is due to the lower procurement quantity.

⁽⁹⁾ EM442 Install/Mission Kits: FY 2016 - FY 2018 is composed of Augmented Flight Termination System (AFTS) and Mission Specific Equipment (MSE) Kits. Increase in targets required to meet the fleet requirement of more exercise firings on surface ships to build fleet operator confidence and proficiency in operation of anti-ship cruise missile defense systems. Mission kit quantities vary depending on fleet

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Other Targets [Other]
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
test & evaluation training requirements and are not procured on a one for one basis with air vehicle quantities. The kit procurements are based on a projection of the user demand which is based on the mission profiles required for specific test objectives. Each type of kit is priced differently so the total costs of the kits is not a direct reflection on the quantity of kits being procured. ⁽¹⁰⁾ Long lead component funds are required for the procurement of D6AC steel for production of GQM-163A ducted rocket housings. The FY 2018 long lead procurement is for the FY 2019 target buy; the decrease in FY 2018 is based on the decreased target quantities in FY 2019. The target quantities decreased from 17 units in FY 2018 to 15 units in FY 2019.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2280 / Aerial Targets	Item Number / Title [DODIC]: 3 / Other Targets [Other]

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 (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) EM203 GQM-163A (SSST) ^(†)		2014 ⁽¹¹⁾	ORBITAL SCIENCES ⁽¹²⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Oct 2014	Mar 2017	4	5,505.250	Y		Mar 2014
1.1.2) EM203 GQM-163A (SSST) ^(†)		2015 ⁽¹³⁾	ORBITAL SCIENCES ⁽¹²⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Dec 2014	Feb 2018	5	4,688.000	Y		Mar 2014
1.1.2) EM203 GQM-163A (SSST) ^(†)		2016 ⁽¹⁴⁾	ORBITAL SCIENCES ⁽¹²⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Jul 2016	Sep 2018	5	4,410.000	Y		Feb 2016
1.1.2) EM203 GQM-163A (SSST) ^(†)		2017 ⁽¹⁵⁾	ORBITAL SCIENCES ⁽¹²⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Sep 2017	Nov 2019	24	3,328.667	Y		Sep 2016
1.1.2) EM203 GQM-163A (SSST) ^(†)		2018 ⁽¹⁶⁾	ORBITAL SCIENCES ⁽¹²⁾ / CHANDLER AZ	SS / FFP	NAVAIR	Mar 2018	Apr 2020	17	3,543.706	Y		Sep 2016

^(†) indicates the presence of a P-21

Footnotes:

⁽¹¹⁾ FRP8

⁽¹²⁾ The maximum production rate is currently limited to 24 units due to the availability of Government Furnished Property (GFP). The program is exploring GFP alternatives in order to increase the maximum procurement rate to 30 units per year.

⁽¹³⁾ FRP9

⁽¹⁴⁾ FRP10

⁽¹⁵⁾ FRP11 will include a base plus pre-negotiated options for the following two production lots (FRP12 and FRP13).

⁽¹⁶⁾ FRP12 is expected to be a pre-negotiated option that is negotiated in conjunction with the FRP11 contract.

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Exhibit P-21, Production Schedule: FY 2018 Navy																								Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2280 / Aerial Targets														Item Number / Title [DODIC]: 3 / Other Targets [Other]											
Cost Elements (Units in Each)							Fiscal Year 2015														Fiscal Year 2016														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015														Calendar Year 2016														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
1.1.2) EM203 GQM-163A (SSST) ⁽⁸⁾																																			
Prior Years Deliveries: 71																																			
	1	2014	NAVY	4	0	4	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4			
	1	2014	FMS ^(‡)	4	0	4	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4			
	1	2014	Total	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8			
	1	2015	NAVY	5	0	5				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5			
	1	2015	FMS ^(‡)	2	0	2				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2			
	1	2015	Total	7	0	7				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7			
	1	2016	NAVY	5	0	5																									A -	-	-	-	5
	1	2016	FMS ^(‡)	3	0	3																									A -	-	-	-	3
	1	2016	Total	8	0	8																									-	-	-	-	8
	1	2017	NAVY	24	0	24																												24	
	1	2018	NAVY	17	0	17																												17	
	1	2018	FMS ^(‡)	2	0	2																												2	
	1	2018	Total	19	0	19																												19	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2280 / Aerial Targets												Item Number / Title [DODIC]: 3 / Other Targets [Other]																
Cost Elements (Units in Each)							Fiscal Year 2017												Fiscal Year 2018												B A L A N C E				
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					
1.1.2) EM203 GQM-163A (SSST) ⁽⁸⁾																																			
Prior Years Deliveries: 71																																			
	1	2014	NAVY	4	0	4	-	-	-	-	-	1	1	1	1	-	-	-															0		
	1	2014	FMS ^(‡)	4	0	4	-	-	-	-	-	-	-	-	1	1	1	1															0		
	1	2014	Total	8	0	8	-	-	-	-	-	1	1	1	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2015	NAVY	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-			0				
	1	2015	FMS ^(‡)	2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1		0				
	1	2015	Total	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	-		0				
	1	2016	NAVY	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4				
	1	2016	FMS ^(‡)	3	0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3				
	1	2016	Total	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7					
	1	2017	NAVY	24	0	24													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	24		
	1	2018	NAVY	17	0	17																			A -	-	-	-	-	-	-	-	-	17	
	1	2018	FMS ^(‡)	2	0	2																			A -	-	-	-	-	-	-	-	-	2	
	1	2018	Total	19	0	19																			-	-	-	-	-	-	-	-	-	-	19
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2280 / Aerial Targets										Item Number / Title [DODIC]: 3 / Other Targets [Other]														
Cost Elements (Units in Each)							Fiscal Year 2019										Fiscal Year 2020													BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP			
1.1.2) EM203 GQM-163A (SSST) ⁽⁸⁾																																		
Prior Years Deliveries: 71																																		
	1	2014	NAVY		4	4	0																											0
	1	2014	FMS ^(‡)		4	4	0																											0
	1	2014	Total		8	8	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2015	NAVY		5	5	0																											0
	1	2015	FMS ^(‡)		2	2	0																											0
	1	2015	Total		7	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2016	NAVY		5	1	4	1	1	1	1	-	-	-																				0
	1	2016	FMS ^(‡)		3	0	3	-	-	-	-	1	1	1																				0
	1	2016	Total		8	1	7	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2017	NAVY		24	0	24	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2			
	1	2018	NAVY		17	0	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	1	6			
	1	2018	FMS ^(‡)		2	0	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1				
	1	2018	Total		19	0	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	7	7			
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2280 / Aerial Targets										Item Number / Title [DODIC]: 3 / Other Targets [Other]														
Cost Elements (Units in Each)							Fiscal Year 2021												Fiscal Year 2022												B A L A N C E			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 2 0	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022															
							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				
1.1.2) EM203 GQM-163A (SSST) ⁽⁸⁾																																		
Prior Years Deliveries: 71																																		
	1	2014	NAVY		4	4	0																											0
	1	2014	FMS ^(‡)		4	4	0																											0
	1	2014	Total		8	8	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2015	NAVY		5	5	0																											0
	1	2015	FMS ^(‡)		2	2	0																											0
	1	2015	Total		7	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2016	NAVY		5	5	0																											0
	1	2016	FMS ^(‡)		3	3	0																											0
	1	2016	Total		8	8	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2017	NAVY		24	22	2	2																										0
	1	2018	NAVY		17	11	6	1	1	1	1	1	1																				0	
	1	2018	FMS ^(‡)		2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2018	Total		19	12	7	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
								O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2280 / Aerial Targets				Item Number / Title [DODIC]: 3 / Other Targets [Other]			

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	ORBITAL SCIENCES ⁽¹²⁾ - CHANDLER AZ	6	21	24	0	0	25	25	0	6	25	31

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"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:

⁽¹²⁾ The maximum production rate is currently limited to 24 units due to the availability of Government Furnished Property (GFP). The program is exploring GFP alternatives in order to increase the maximum procurement rate to 30 units per year.

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2							P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 4 / Aux / Aug System Targets								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				2,408.561			13.205			12.665			18.031			0.000			18.031		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				2,408.561			13.205			12.665			18.031			0.000			18.031		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				2,408.561			13.205			12.665			18.031			0.000			18.031		
(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>				-			-			-			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements		Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)		
Flyaway - Aux/Aug Sys Targets Hardware Cost																					
Recurring Cost																					
1.1.1) EM301 Command/Control Equipment		-	-	15.812	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.1.2) EM302 Scoring Equipment		-	-	12.785	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.1.3) EM303 Location/ID Equipment		-	-	5.136	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.1.4) EM304 ECM/Emitter Equipment ⁽¹⁷⁾		-	-	41.972	-	-	5.627	-	-	5.134	-	-	7.944	-	-	0.000	-	-	7.944		
1.1.5) EM305 Augmentation/Navigation Equipment		-	-	0.583	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.1.6) EM307 Target Common Avionics Equipment ⁽¹⁸⁾		-	-	4.122	-	-	3.820	-	-	3.809	-	-	6.245	-	-	0.000	-	-	6.245		
1.1.7) Government Test Program		-	-	0.195	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.1.8) EM423 Product Improvement		-	-	2.500	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
1.1.9) EM443 Install.Mission Kits		-	-	1.200	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000		
Subtotal: Recurring Cost		-	-	84.305	-	-	9.447	-	-	8.943	-	-	14.189	-	-	0.000	-	-	14.189		
Subtotal: Flyaway - Aux/Aug Sys Targets Hardware Cost		-	-	84.305	-	-	9.447	-	-	8.943	-	-	14.189	-	-	0.000	-	-	14.189		

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2280 / Aerial Targets						Item Number / Title [DODIC]: 4 / Aux / Aug System Targets						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Flyaway - Aux/Aug Sys Targets FY06 and PRIOR Cost																		
Non Recurring Cost																		
2.1.1) FY06 and Prior	-	-	295.127	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	295.127	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Flyaway - Aux/ Aug Sys Targets FY06 and PRIOR Cost	-	-	295.127	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Flyaway - Prior Year Costs no longer financed beyond 1995 Cost																		
Non Recurring Cost																		
3.1.1) Prior year costs no longer financed beyond 1995	-	-	1,992.884	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	1,992.884	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Flyaway - Prior Year Costs no longer financed beyond 1995 Cost	-	-	1,992.884	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - Aux/Aug Sys Targets Support Cost																		
4.1) EM823 Training Equipment	-	-	1.557	-	-	0.187	-	-	0.185	-	-	0.194	-	-	0.000	-	-	0.194
4.2) EM853 Production Engineering Support	-	-	27.850	-	-	2.916	-	-	2.870	-	-	2.959	-	-	0.000	-	-	2.959
4.3) EM863 Integrated Logistics Support (ILS)	-	-	5.706	-	-	0.578	-	-	0.589	-	-	0.609	-	-	0.000	-	-	0.609
4.4) EM873 Documentation	-	-	1.132	-	-	0.077	-	-	0.078	-	-	0.080	-	-	0.000	-	-	0.080
Subtotal: Support - Aux/Aug Sys Targets Support Cost	-	-	36.245	-	-	3.758	-	-	3.722	-	-	3.842	-	-	0.000	-	-	3.842
Gross/Weapon System Cost	-	-	2,408.561	-	-	13.205	-	-	12.665	-	-	18.031	-	-	0.000	-	-	18.031
Footnotes: (17) EM304 ECM/Emitter Equipment was increased from FY 2017 to FY 2018 to fund required procurements of threat simulator payloads to meet increased Fleet operations. (18) EM307 Target Common Avionics Equipment was increased from FY 2017 to FY 2018 to fund required procurements of target ground control systems and avionics equipment to meet increased Fleet operations.																		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2290 / Other Missile Support					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	48.749	1.835	3.248	3.420	0.000	3.420	3.489	3.562	3.637	3.709	-	71.649
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	48.749	1.835	3.248	3.420	0.000	3.420	3.489	3.562	3.637	3.709	-	71.649
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	48.749	1.835	3.248	3.420	0.000	3.420	3.489	3.562	3.637	3.709	-	71.649
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	0.579	0.309	1.112	-	1.112	0.411	1.391	-	-	-	3.802
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The MK-41 Vertical Launching System (VLS) is a surface combatant missile launching system designed to store, select, and launch various Standard Missile configurations, Tomahawk, Tactical Tomahawk, Evolved Seasparrow (ESSM) and Vertical Launch Anti-Submarine Rocket (ASROC) (VLA) missiles. The MK-41 VLS significantly improves missile capacity, flexibility, multi-mission capability, reaction time, rate of fire, and is designed to be adaptable to present and future weapon systems. Current configurations are: two 61 cell launchers (forward and aft) for 22 TICONDEROGA (CG 47) Class Cruisers beginning with CG-52, one 61 cell aft and one 29 cell launcher forward for 28 ARLEIGH BURKE (DDG 51) Class Destroyers, one 64 cell launcher aft and one 32 cell launcher forward for 34 DDG 51 FLT IIA ships.												
[P5 / CANISTER EQUIPMENT]: Funds procurement and installation of canister and gas management hardware Engineering Change Proposals (ECPs) and Ordnance Alterations (ORDALTs).												
Justification: Funds are required for production support and Integrated Logistics Support (ILS) including: supply support, provisioning and technical documentation in support of weapon stations, All Up Round (AUR) facilities, and the fleet. Funds also provide for development and procurement of critical Engineering Change Proposals (ECP) and Ordnance Alterations (ORDALT) that improve reliability and implement safety upgrades for MK-41 VLS canisters and gas management hardware. Availability of upgraded canisters, canister hardware, and gas management hardware directly impacts fleet loadouts, operational availability, and safety.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles							P-1 Line Item Number / Title: 2291 / LRASM					
ID Code (A=Service Ready, B=Not Service Ready): B				Program Elements for Code B Items: 0204167N				Other Related Program Elements: 0604786N				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	10	25	-	25	25	25	-	-	-	85
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	29.643	74.733	0.000	74.733	74.784	75.000	0.000	0.000	-	254.160
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	29.643	74.733	0.000	74.733	74.784	75.000	0.000	0.000	-	254.160
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	29.643	74.733	0.000	74.733	74.784	75.000	0.000	0.000	-	254.160
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	2,964K	2,989K	-	2,989K	2,991K	3,000K	-	-	-	2,990K

Description:

Long Range Anti-Ship Missile (LRASM) is Increment 1 of the Offensive Anti-Surface Warfare (OASuW) weapon development program. LRASM will be a key air launched component of the Navy's overall Cruise Missile Strategy. The Department will transition the Defense Advanced Research Projects Agency (DARPA) / Office of Naval Research (ONR) LRASM demonstration design into a fielded weapon system which will support an increased offensive strike capability with an Early Operational Capability (EOC) in 2018 for U.S. Air Force B-1 and 2019 on U.S. Navy F/A-18E/F. In response to U.S. Pacific Command Urgent Operation Need (UON) statement, LRASM is intended to provide the first increment of the next generation ASuW capabilities addressing the most urgent air-launched requirement, significantly reducing joint force warfighting risks, and positioning the Department to address evolving surface warfare threats.

The U.S. Air Force will be procuring LRASMs in FY 2017 through FY 2019 at the following quantities:
FY 2017 - 20
FY 2018 - 15
FY 2019 - 15

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles						P-1 Line Item Number / Title: 2291 / LRASM				
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: 0204167N			Other Related Program Elements: 0604786N				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LRASM	P-5a, P-21			- / 0.000	- / 0.000	10 / 29.643	25 / 74.733	- / 0.000	25 / 74.733
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	10 / 29.643	25 / 74.733	- / 0.000	25 / 74.733
*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:
 Funding in FY 2018 is provided to procure a total of 25 units to support EOC in 2019 for Navy lead platform (F/A-18E/F).

LRASM development/fielding is funded to focus on meeting the time-critical requirements, while accepting manageable levels of technical risk, and is utilizing the DoD Instruction 5000.02 Model 4 Accelerated Acquisition process to achieve speed to the fleet. The program's funding profile was developed to enable fielding at the time required by the warfighter. Due to the accelerated nature of the program's acquisition strategy, volatility in the funding profile has an intensified impact on the program's ability to meet the early operational requirements, and any reduction in funding will increase risk to fielding the required capability at the specified time.

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2291 / LRASM						Item Number / Title [DODIC]: 1 / LRASM						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				-		-		10		25		-		25				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				0.000		0.000		29.643		74.733		0.000		74.733				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				0.000		0.000		29.643		74.733		0.000		74.733				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				0.000		0.000		29.643		74.733		0.000		74.733				
(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>				-		-		2,964K		2,989K		-		2,989K				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - LRASM Cost																		
Recurring Cost																		
1.1.1) All Up Round (AUR) ⁽¹⁾ (1)	-	-	-	-	-	-	2,674K	10	26.737	2,725K	25	68.118	-	-	-	2,725K	25	68.118
1.1.2) Contractor ECO ⁽²⁾ (2)	-	-	-	-	-	-	-	-	1.263	-	-	3.229	-	-	-	-	-	3.229
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	28.000	-	-	71.347	-	-	-	-	-	71.347
Subtotal: Hardware - LRASM Cost	-	-	-	-	-	-	-	-	28.000	-	-	71.347	-	-	-	-	-	71.347
Hardware - Nonrecurring and Ancillary Equip Cost																		
Non Recurring Cost																		
2.1.1) Containers ⁽³⁾ (3)	-	-	-	-	-	-	-	-	0.259	-	-	0.632	-	-	-	-	-	0.632
Subtotal: Non Recurring Cost	-	-	-	-	-	-	-	-	0.259	-	-	0.632	-	-	-	-	-	0.632
Subtotal: Hardware - Nonrecurring and Ancillary Equip Cost	-	-	-	-	-	-	-	-	0.259	-	-	0.632	-	-	-	-	-	0.632
Support Cost																		
3.1) GIH Production Support ⁽⁴⁾ (4)	-	-	-	-	-	-	-	-	1.384	-	-	2.754	-	-	-	-	-	2.754
Subtotal: Support Cost	-	-	-	-	-	-	-	-	1.384	-	-	2.754	-	-	-	-	-	2.754
Gross/Weapon System Cost	-	-	0.000	-	-	0.000	2,964K	10	29.643	2,989K	25	74.733	-	-	0.000	2,989K	25	74.733

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2291 / LRASM	Item Number / Title [DODIC]: 1 / LRASM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
(†) indicates the presence of a P-5a Footnotes: (1) While the quantity procured by the Navy increases from FY 2017 to FY 2018, the overall production quantity increase (to include USAF) is minimal, resulting in no cost savings. The AUR unit cost is based on a projected LRASM-unique items, JASSM-ER production costs, and anticipated inflation rates. (2) Increase in Contractor ECO from FY 2017 to FY 2018 is due to anticipated software systems assessment analysis, obsolescence, engineering change proposals (ECPs) and mission planning updates for the increased number of production assets. (3) Ratio of containers to AURs is 1:1. (4) Production support increases from FY 2017 to FY 2018 as government production support ramps to full capacity.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2291 / LRASM				Item Number / Title [DODIC]: 1 / LRASM				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) All Up Round (AUR) ^(†)		2017 ⁽⁵⁾	Lockheed Martin Missiles and Fire Control ⁽⁶⁾ / Orlando, FL	C / TBD	Eglin AFB	May 2017	Jun 2018	10	2,674K	Y		Oct 2015
1.1.1) All Up Round (AUR) ^(†)		2018 ⁽⁷⁾	Lockheed Martin Missiles and Fire Control ⁽⁶⁾ / Orlando, FL	C / TBD	Eglin AFB	Jan 2018	Jun 2019	25	2,725K	Y		Jan 2017

^(†) indicates the presence of a P-21

Footnotes:

⁽⁵⁾ Award date represents the initial U.S. Air Force and U.S. Navy procurements. The LRASM program received approval in February 2017 to proceed to production.

⁽⁶⁾ Initial Procurement Lead Time represents time from award to delivery of first Navy AURs.

⁽⁷⁾ Award date represents both U.S. Air Force and U.S. Navy procurements.

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2291 / LRASM										Item Number / Title [DODIC]: 1 / LRASM																		
Cost Elements <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							
1.1.1) All Up Round (AUR) ⁽¹⁾																																						
	1	2017	NAVY	10 ⁽⁸⁾	0	10								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10					
	1	2017	AF ^(‡)	20	0	20								A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	4	4	6					
	1	2017	Total	30	0	30								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	4	4	16					
	1	2018	NAVY	25 ⁽⁹⁾	0	25																A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	
	1	2018	AF ^(‡)	15	0	15																A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
	1	2018	Total	40	0	40																-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P								

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2										P-1 Line Item Number / Title: 2291 / LRASM										Item Number / Title [DODIC]: 1 / LRASM													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019										Fiscal Year 2020												BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019										Calendar Year 2020																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL		AUG	SEP		
1.1.1) All Up Round (AUR) ⁽¹⁾																																	
	1	2017	NAVY	10 ⁽⁸⁾	0	10	-	-	-	2	4	4																					0
	1	2017	AF ^(‡)	20	14	6	4	2	-	-	-																					0	
	1	2017	Total	30	14	16	4	2	-	2	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
	1	2018	NAVY	25 ⁽⁹⁾	0	25	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2	2	2	3					0			
	1	2018	AF ^(‡)	15	0	15	-	-	-	-	-	-	-	-	1	1	1	1	1	1	2	2	2	2	1	-					0		
	1	2018	Total	40	0	40	-	-	-	-	-	-	-	-	3	3	3	3	3	3	4	4	4	4	3	3	-	-	-	-	0		
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy							Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2291 / LRASM				Item Number / Title [DODIC]: 1 / LRASM	

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 Missiles and Fire Control ⁽⁶⁾ - Orlando, FL	12	48	48	0	8	20	28	0	4	17	21

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule.

"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:

⁽⁶⁾ Initial Procurement Lead Time represents time from award to delivery of first Navy AURs.

⁽⁸⁾ In FY 2017 delivery of the 10 U.S. Navy units will follow the delivery of US Air Force units per the negotiated US Air Force contract.

⁽⁹⁾ Delivery schedule represents FY 2018 Production Buy for 15 U.S. Air Force units and 25 U.S. Navy units.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles							P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)					
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: 197												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (Units in Each)	847	30	75	30	1	31	45	58	125	175	Continuing	Continuing
Gross/Weapon System Cost (\$ in Millions)	1,197.676	37.671	107.397	74.524	1.768	76.292	99.433	125.513	218.927	295.154	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	54.462	-	-	-	-	-	-	-	-	54.462
Net Procurement (P-1) (\$ in Millions)	1,197.676	37.671	52.935	74.524	1.768	76.292	99.433	125.513	218.927	295.154	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	54.462	-	-	-	-	-	-	-	-	-	54.462
Total Obligation Authority (\$ in Millions)	1,197.676	92.133	52.935	74.524	1.768	76.292	99.433	125.513	218.927	295.154	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	1,414K	1,256K	1,432K	2,484K	1,768K	2,461K	2,210K	2,164K	1,751K	1,687K	Continuing	Continuing
Description: The Evolved SEASPARROW Missile (ESSM) Program is an international cooperative effort to design, develop, test, produce and provide in-service support to a new and improved version of the SPARROW missile (RIM-7P) with the kinematic performance to defeat current and projected threats that possess low altitude, high velocity and maneuver characteristics beyond the engagement capabilities of the RIM-7P. ESSM provides an evolved kinematically improved aft-end missile section for mating, as an All Up Round, with the modified RIM-7P forebody guidance and warhead section. ESSM provides the capability to counter high G maneuvering anti-ship missiles, expand the battle space, and increase system firepower. Additionally, ESSM provides robust defense against asymmetric threats such as small surface craft, low velocity air threats and helicopters. ESSM is designed for quad pack use in the MK-41 Vertical Launching System of AEGIS destroyers and cruisers and in the MK-57 launching system on DDG 1000. In February 2008, ESSM began integration into Ship Self-Defense System (SSDS) on CVN's, LHD- 7/8, and LHA-6. ESSM is a cooperative effort among ten NATO SEASPARROW nations (Australia, Canada, Denmark, Germany, Greece, Netherlands, Norway, Spain, Turkey, and the U.S.). An addendum to the NATO SEASPARROW Surface Missile System Memorandum of Understanding (MOU), covering the Engineering and Manufacturing Development (EMD) phase of the ESSM, was signed in June 1995. The MOU for the cooperative production of ESSM was signed 27 December 1997 with a U.S. production intent of 2,076 missiles. Authority to enter Low Rate Initial Production (LRIP) for 207 missiles was granted 7 March 2001. Approval for Full Rate Production (FRP) was given 12 January 2004. Reached Initial Operational Capacity (IOC) on DDG-51 Flt IIA in Spring 2004. ESSM Block 2 upgrade is a cooperative effort between U.S Navy and NATO SEASPARROW Consortium Nations. ESSM Block 2 upgrade replaces the largely obsolete guidance section with a dual mode Active/Semi-Active X-Band seeker capable of defeating future threat capabilities within the existing envelope, including smaller signatures, increased raid sizes, and adverse environments including countermeasures. Threat types include advanced ASCMs, Anti-Ship Ballistic Missiles (ASBMs), surface and asymmetrical.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles						P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)				
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: 197										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Evolved Sea Sparrow Missile (ESSM)	P-5a, P-21			847 / 1,197.676	30 / 37.671	75 / 107.397	30 / 74.524	1 / 1.768	31 / 76.292
P-40	Total Gross/Weapon System Cost				847 / 1,197.676	30 / 37.671	75 / 107.397	30 / 74.524	1 / 1.768	31 / 76.292
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: FY 2017 supports a contract award of 75 missiles, plus, the U.S. share of support as defined in the MOU. The budget is based on approval of a two year (FY 2016 - FY 2017) multi-year contract for procurement of 105 Block 1 missiles (30 Block I missiles in FY 2016 and 75 Block 1 missiles in FY 2017). Economic Order Quantity (EOQ) required to support this contract award is \$54.4M in FY 2017. FY 2018 supports the first procurement of 30 ESSM Block II missiles, which will be procured under a separate contract from the ESSM Block 1 missiles. FY 2018 funding increase in MK-25 canisters due to transitioning from MK-25 Mod 0 canisters (ESSM Block 1) to MK-25 Mod 1 canisters (ESSM Block 2). FY 2018 funding increase in procurement support for transition to ESSM Block 2 procurement in FY 2018. FY 2018 funding increase in procurement of MK-30 canisters to support the MK-30 Mod 6 launchers and canisters for ESSM Ship Self Defense System (SSDS) Initial Operational Test & Evaluation (IOT&E). OCO: OCO funding supports the procurement of a ESSM Block 2 missile. This ESSM Block 2 round is a replacement missile for the RIM 162A that was expended during fifth fleet operations in FY 2016.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3						P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)						Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				847		30		75		30		1		31				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				1,197.676		37.671		107.397		74.524		1.768		76.292				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		54.462		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				1,197.676		37.671		52.935		74.524		1.768		76.292				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		54.462		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				1,197.676		92.133		52.935		74.524		1.768		76.292				
(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>				1,414K		1,256K		1,432K		2,484K		1,768K		2,461K				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 Cost																		
Non Recurring Cost																		
1.1.1) FUZE ECP BACKFIT	-	-	4.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) COMPOSITE RADOME	-	-	7.871	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) MISSILE HARDWARE	-	-	0.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.4) RADOM LIFE OF TYPE BUY	-	-	3.779	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) ROCKET MOTORS (SEASPARROW)	-	-	6.396	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	23.346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	23.346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - MK25 QUADPACK CANISTERS Cost																		
Recurring Cost																		
2.1.1) MK 25 QUADPACK CANISTERS ^{(†) (1)}	338,434.48	145	49.073	419,200.00	3	1.258	415,785.00	19	7.900	450,000.00	8	3.600	-	-	-	450,000.00	8	3.600
2.1.2) MK 30 CANISTER ^{(†) (2)}	-	-	-	-	-	-	-	-	-	300,000.00	32	9.600	-	-	-	300,000.00	32	9.600
Subtotal: Recurring Cost	-	-	49.073	-	-	1.258	-	-	7.900	-	-	13.200	-	-	-	-	-	13.200

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3						P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)						Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Subtotal: Hardware - MK25 QUADPACK CANISTERS Cost	-	-	49.073	-	-	1.258	-	-	7.900	-	-	13.200	-	-	-	-	-	13.200
Hardware - ESSM MISSILES Cost																		
Recurring Cost																		
3.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE ^{(†) (3)}	839,334.72	481	403.720	1,038K	12	12.456	1,201K	51	61.270	-	-	-	-	-	-	-	-	-
3.1.2) MK 29 ALL UP ROUNDS MISSILE HARDWARE ^{(†) (4)}	811,354.40	443	359.430	971,944.44	18	17.495	-	-	-	-	-	-	-	-	-	-	-	-
3.1.3) MK 57 ALLUP ROUNDS MISSILE HARDWARE ^{(†) (5)}	967,833.33	6	5.807	-	-	-	1,277K	24	30.648	-	-	-	-	-	-	-	-	-
3.1.4) MK 41 X-BAND ALL UP ROUNDS MISSILE HARDWARE	858,500.00	20	17.170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.1.5) ESSM BLOCK 2 ^(†)	-	-	-	-	-	-	-	-	-	1,768K	30	53.053	1,768K	1	1.768	1,768K	31	54.821
3.1.6) WARHEAD COMPATIBLE TELEMETER ^(†)	69,728.57	210	14.643	76,333.33	6	0.458	76,320.00	28	2.137	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	800.770	-	-	30.409	-	-	94.055	-	-	53.053	-	-	1.768	-	-	54.821
Subtotal: Hardware - ESSM MISSILES Cost	-	-	800.770	-	-	30.409	-	-	94.055	-	-	53.053	-	-	1.768	-	-	54.821
Hardware - SHIPPING CONTAINERS Cost																		
Recurring Cost																		
4.1.1) ESSM SHIPPING CONTAINERS ^(†)	9,209.35	449	4.135	6,166.67	18	0.111	-	-	-	6,250.00	8	0.050	-	-	-	6,250.00	8	0.050
Subtotal: Recurring Cost	-	-	4.135	-	-	0.111	-	-	-	-	-	0.050	-	-	-	-	-	0.050
Subtotal: Hardware - SHIPPING CONTAINERS Cost	-	-	4.135	-	-	0.111	-	-	-	-	-	0.050	-	-	-	-	-	0.050
Support Cost																		
5.1) PROCUREMENT SUPPORT ⁽⁶⁾	-	-	239.266	-	-	3.657	-	-	1.550	-	-	4.191	-	-	-	-	-	4.191
5.2) TOOLING AND TEST SUPPORT	-	-	40.428	-	-	0.510	-	-	0.598	-	-	0.596	-	-	-	-	-	0.596

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3						P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)							Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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) DIMINISHING MANUFACTURING SERVICES	-	-	-	-	-	-	-	-	2.118	-	-	2.265	-	-	-	-	-	2.265
5.5) PERFORMANCE CHARACTERIZATION	-	-	29.924	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.6) ILS/FLEET DOCUMENTATION	-	-	1.229	-	-	0.750	-	-	0.675	-	-	0.717	-	-	-	-	-	0.717
5.7) COMPONENT IMPROVEMENT/ECPS	-	-	9.505	-	-	0.976	-	-	0.501	-	-	0.452	-	-	-	-	-	0.452
Subtotal: Support Cost	-	-	320.352	-	-	5.893	-	-	5.442	-	-	8.221	-	-	-	-	-	8.221
Gross/Weapon System Cost	1,414K	847	1,197.676	1,256K	30	37.671	1,432K	75	107.397	2,484K	30	74.524	1,768K	1	1.768	2,461K	31	76.292

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

Footnotes:

- (1) FY 2018 funding increase in MK-25 canisters due to transitioning from MK-25 Mod 0 canisters (ESSM Block 1) to MK-25 Mod 1 canisters (ESSM Block 2).
- (2) FY 2018 funding increase in procurement of MK-30 canisters to support the MK-30 Mod 6 launchers and canisters for ESSM Ship Self Defense System (SSDS) Initial Operational Test & Evaluation (IOT&E).
- (3) Included in the FY 2016 - FY 2017 Multi-year Procurement contract.
- (4) Included in the FY 2016 - FY 2017 Multi-year Procurement contract.
- (5) Included in the FY 2016 - FY 2017 Multi-year Procurement contract.
- (6) FY 2018 funding increase in procurement support for transition to ESSM Block 2 procurement in FY 2018.

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3			P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)					Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)				
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
2.1.1) MK 25 QUADPACK CANISTERS		2016	BAE / Minneapolis, MN	SS / FFP	NAVSEA	Mar 2016	Jun 2017	3	419,200.00	N		Feb 2014
2.1.1) MK 25 QUADPACK CANISTERS		2017	BAE / Minneapolis, MN	SS / FFP	NAVSEA	May 2017	Aug 2018	19	415,785.00	N		Feb 2015
2.1.1) MK 25 QUADPACK CANISTERS		2018	BAE / Minneapolis, MN	SS / FFP	NAVSEA	Feb 2018	May 2019	8	450,000.00	N		Feb 2016
2.1.2) MK 30 CANISTER		2018	BAE @MINNEAPOLIS, MN / Minneaplois, MN	C / TBD	NAVSEA	Oct 2017	Jan 2019	32	300,000.00	N		
3.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE		2015	Raytheon CO ⁽⁷⁾ / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	Mar 2017	41	1,023K	Y		Oct 2013
3.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE		2016 ⁽⁸⁾	Raytheon CO ⁽⁷⁾ / Tucson, AZ	SS / FFP	NAVSEA	Mar 2016	Mar 2018	12	1,038K	Y		Oct 2014
3.1.1) MK 41 AEGIS ALL UP ROUND MISSILE HARDWARE		2017 ⁽⁹⁾	Raytheon CO ⁽⁷⁾ / Tucson, AZ	SS / FFP	NAVSEA	May 2017	May 2019	51	1,201K	Y		Oct 2015
3.1.2) MK 29 ALL UP ROUNDS MISSILE HARDWARE		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	Mar 2017	63	898,825.40	Y	Mar 2000	Jun 2013
3.1.2) MK 29 ALL UP ROUNDS MISSILE HARDWARE		2016 ⁽¹⁰⁾	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2016	Mar 2018	18	971,944.44	Y	Mar 2000	Jun 2014
3.1.3) MK 57 ALLUP ROUNDS MISSILE HARDWARE		2017 ⁽¹¹⁾	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Oct 2016	Oct 2018	24	1,277K	N		
3.1.5) ESSM BLOCK 2 ^(†)		2018	Raytheon CO / Tucson, AZ	C / TBD	NAVSEA	Aug 2018	Aug 2020	30	1,768K	N	Oct 2017	Oct 2017
3.1.6) WARHEAD COMPATIBLE TELEMETER		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	Sep 2017	41	74,829.27	Y	Mar 2000	Jun 2014
3.1.6) WARHEAD COMPATIBLE TELEMETER		2016 ⁽¹²⁾	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2016	Sep 2018	6	76,333.33	Y	Mar 2000	Jun 2015
3.1.6) WARHEAD COMPATIBLE TELEMETER		2017 ⁽¹³⁾	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	May 2017	Nov 2019	28	76,320.00	Y	Mar 2000	Jun 2016
4.1.1) ESSM SHIPPING CONTAINERS		2015	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Mar 2015	May 2017	63	6,031.75	Y	Mar 2000	Oct 2014
4.1.1) ESSM SHIPPING CONTAINERS		2016 ⁽¹⁴⁾	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2016	Feb 2019	18	6,166.67	Y	Mar 2000	Oct 2015
4.1.1) ESSM SHIPPING CONTAINERS		2018 ⁽¹⁵⁾	Raytheon CO / Tucson, AZ	SS / FFP	NAVSEA	Dec 2017	Feb 2020	8	6,250.00	Y		Oct 2017
^(†) indicates the presence of a P-21												
Footnotes:												
⁽⁷⁾ ESSM is a cooperative effort among ten NATO SEASPARROW nations which contributes to MSR.												

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3	P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)	Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)
(8) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (9) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (10) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (11) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (12) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (13) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (14) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract. (15) Included on the FY 2016 - FY 2017 Multi-Year Procurement contract.		

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3							P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)														Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)														
Cost Elements (Units in Each)							Fiscal Year 2015														Fiscal Year 2016														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015														Calendar Year 2016														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
3.1.5) ESSM BLOCK 2																																			
	1	2018	NAVY		30	0	30																									30			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3										P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)										Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017										Fiscal Year 2018													BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017										Calendar Year 2018														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP
3.1.5) ESSM BLOCK 2																															
	1	2018	NAVY		30	0	30																					A -	-	30	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3										P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)										Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)											
Cost Elements (Units in Each)							Fiscal Year 2019										Fiscal Year 2020										BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019										Calendar Year 2020														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP
3.1.5) ESSM BLOCK 2																															
	1	2018	NAVY	30	0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	18
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																		
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3										P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)														Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)													
Cost Elements (Units in Each)							Fiscal Year 2021														Fiscal Year 2022														BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021														Calendar Year 2022																
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP							
3.1.5) ESSM BLOCK 2																																					
	1	2018	NAVY		30	12	18	4	4	4	4	2																					0				
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP						

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3					P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)				Item Number / Title [DODIC]: 1 / Evolved Sea Sparrow Missile (ESSM)			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 CO - Tucson, AZ	180	300	420	8	2	24	26	2	2	24	26

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Advance Procurement Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles							P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)					
Program Elements for Code B Items: N/A							Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: 197												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	54.462	-	-	-	-	-	-	-	-	-	54.462
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	54.462	-	-	-	-	-	-	-	-	-	54.462
Total Obligation Authority (<i>\$ in Millions</i>)	-	54.462	-	-	-	-	-	-	-	-	-	54.462

Description:

The Evolved SEASPARROW Missile (ESSM) Program is an international cooperative effort to design, develop, test, produce and provide in-service support to a new and improved version of the SPARROW missile (RIM-7P) with the kinematic performance to defeat current and projected threats that possess low altitude, high velocity and maneuver characteristics beyond the engagement capabilities of the RIM-7P. The ESSM provides an evolved kinematically improved aft-end missile section for mating, as an All Up Round, with the modified RIM-7P forebody guidance and warhead section. ESSM provides the capability to counter high G maneuvering anti-ship missiles, expand the battle space, and increase system firepower. Additionally, ESSM provides robust defense against asymmetric threats such as small surface craft, low velocity air threats and helicopters. ESSM is designed for quad pack use in the MK-41 Vertical Launching System of AEGIS destroyers and cruisers and in the MK-57 launching system on DDG 1000.

Evolved SEASPARROW Missile (ESSM) will employ a multi-year procurement (MYP) contract for the procurement of 105 Block I ESSM missiles for FY 2016 - FY 2017.

Advance Procurement (AP) funding will be used to procure Economic Order Quantity (EOQ) material for the FY 2017 missiles. AP funds will apply to all configurations of ESSM.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: FY 2018 Navy							Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles					P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)				
Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 197									
Exhibits Schedule				Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-10	1 / Evolved Sea Sparrow Missile (ESSM)			847 / -	30 / 54.462	75 / -	30 / -	1 / -	31 / -
P-40	Total Gross/Weapon System Cost			847 / -	30 / 54.462	75 / -	30 / -	1 / -	31 / -
*Title represents the P-10 Title for Advance Procurement.									
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.									
Justification: The FY 2017 request will support the FY 2017 missile procurement quantity of 75 missiles. The budget is based on a two year (FY 2016 - FY 2017) multi-year contract for procurement of 105 ESSM Block I missiles that will be procured as follows: 30 in FY 2016 and 75 in FY 2017. This multi-year contract included \$54.5M of EOQ in FY 2016 in support of the FY 2017 missile procurement. The MYP contract includes 10% savings over annual contracts from FY 2016 - 2017. Annual hardware contracts from FY 2016 - 2017 totaling \$139.4M are reduced to \$125.5M in the MYP. EOQ will fund the procurement of rocket motors, transition sections, thrust vector controllers (TVCs) and multiple components of the guidance section for the FY 2017 missiles. The rocket motor is the longest lead item (due to the type of steel used) and generally takes 20 - 22 months to deliver. Transition sections take 18 - 20 months to deliver due to the lead time of titanium components. Additionally, this will maintain unfunded termination liability below Congressional notification threshold and mitigate the possibility of government production gap costs.									

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3			P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)		P-5 Number / Title: 1 / Evolved Sea Sparrow Missile (ESSM)	
First System (2018) Award Date: January 2013		First System (2018) Completion Date: January 2013		Interval Between Systems: 0 Months		
Evolved Sea Sparrow Missile (ESSM)		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2016 <i>(Each)</i>	FY 2017 <i>(Each)</i>	FY 2018 <i>(Each)</i>
Quantity			847	30	75	31
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2016 <i>(\$ M)</i>	FY 2017 <i>(\$ M)</i>	FY 2018 <i>(\$ M)</i>
CFE						
FY17 EOQ		0	-	54.462	-	-
<i>Total: CFE</i>			-	54.462	-	0.000
Total Advance Procurement/Obligation Authority			-	54.462	-	-

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): FY 2018 Navy						Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3		P-1 Line Item Number / Title: 2307 / Evolved Sea Sparrow Missile (ESSM)				P-5 Number / Title: 1 / Evolved Sea Sparrow Missile (ESSM)	
Cost Elements	QPA (Each)	FY 2018					
		Production Leadtime (Months)	Unit Cost (\$)	Contract Forecast Date	2018 Qty (Each)	For FY	Total Cost Request (\$ M)
CFE							
FY17 EOQ	0						-
Total: CFE							0.000
Total Advance Procurement/Obligation Authority							-

Description:

Funding to cover EOQ in support of the FY 2016 - 2017 MYP contract. EOQ will fund the procurement of rocket motors, transition sections, thrust vector controllers (TVCs), and multiple components of the guidance section for the FY 2017 missiles. The rocket motor is the longest lead item (due to the type of steel used) and generally takes 20 - 22 months to deliver. Transition sections take 18 - 20 months to deliver due to the lead time of titanium components.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles							P-1 Line Item Number / Title: 2326 / Harpoon Mods					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	17.300	0.000	17.300	15.000	9.600	8.100	0.000	-	50.000
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	17.300	0.000	17.300	15.000	9.600	8.100	0.000	-	50.000
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	17.300	0.000	17.300	15.000	9.600	8.100	0.000	-	50.000
<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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Harpoon Block II+ missile provides the Department of Navy (DON) with an expanded capability. Harpoon Block II+ is a Net Enabled, Air-Launched, Anti-ship Cruise weapon with the ability to receive in-flight updates that improve the targeting and engagement of moving maritime targets. This system utilizes global positioning to provide in-flight updates coupled with an active radar seeker to provide accurate targeting. Justification: FY 2018 provides funding to procure 48 Harpoon Block II+ kits and 6 Captive Air Test Missiles (CATM). The Harpoon Block II+ kits support retrofitting the Harpoon 1C weapons in inventory. The Captive Air Test Missiles (CATM) will provide fleet operators with loading, handling and employment training. Modifying the Harpoon 1C inventory to the Harpoon Block II+ will result in higher average reliability with increased target selectivity. Installation begins in FY 2019.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles							P-1 Line Item Number / Title: 2327 / HARM Mods					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: 0205601N				
Line Item MDAP/MAIS Code: 368												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	531.693	120.798	178.213	183.368	0.000	183.368	190.029	185.905	220.051	208.111	327.067	2,145.235
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	531.693	120.798	178.213	183.368	0.000	183.368	190.029	185.905	220.051	208.111	327.067	2,145.235
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	531.693	120.798	178.213	183.368	0.000	183.368	190.029	185.905	220.051	208.111	327.067	2,145.235
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: AGM-88E Advanced Anti-Radiation Guided Missile (AARGM) is an ACAT-1C acquisition program to upgrade, and is used as a complement to, the Legacy AGM-88 High Speed Anti-Radiation Missile (HARM) with multi-mode guidance and enhanced targeting capability. The AARGM program will integrate multi-mode guidance (passive Anti-Radiation Homing (ARH)/active Millimeter Wave (MMW) Radar/Global Positioning system (GPS)/Inertial Navigation System) on the HARM AGM-88 missile. The AARGM weapon system capabilities include: active MMW terminal guidance, counter shutdown, expanded threat coverage, enhanced ARH receiver, netted targeting real-time feed via Integrated Broadcast System (IBS) prior to missile launch, Weapon Impact Assessment (WIA) transmission prior to detonation, GPS point-to-point weapon navigation, and weapon employment with impact avoidance zone/missile impact zones. IBS Receiver interfaces will enable the warfighter to directly receive national intelligence data, increasing overall pilot situational awareness. AARGM AGM-88E production units possess the capability to engage targets in the Destruction of Enemy Air Defenses (DEAD) mission area and will be able to destroy non-traditional and Overseas Contingency Operation (OCO) targets. AARGM is a cooperative program between the Department of Defense of the United States of America and the Ministry of Defense of the Republic of Italy. The Advanced Anti-Radiation Guided Missile Extended Range (AARGM ER) upgrade includes hardware and software improvements to AARGM's operational capabilities, including extended range, survivability, and effectiveness against complex, new and emerging threats.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles						P-1 Line Item Number / Title: 2327 / HARM Mods				
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A			Other Related Program Elements: 0205601N			
Line Item MDAP/MAIS Code: 368										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	1 / HARM Mods (AARGM) (Added Capability)				- / 531.693	- / 120.798	- / 178.213	- / 183.368	- / 0.000	- / 183.368
P-40	Total Gross/Weapon System Cost				- / 531.693	- / 120.798	- / 178.213	- / 183.368	- / 0.000	- / 183.368
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

Justification:

FY 2018 funding supports the procurement of AARGM modifications kits for All-Up-Rounds (AURs), Captive Air Training Missiles (CATMs), container modifications, telemetry sections, support equipment, engineering and logistics support, Engineering Change Orders (ECO), contractor Other Production Support (OPS), Special Tooling/Special Test Equipment (ST/STE) and Diminishing Manufacturing Sources (DMS).

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Exhibit P-3a, Individual Modification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3			P-1 Line Item Number / Title: 2327 / HARM Mods		Modification Number / Title: 1 / HARM Mods (AARGM)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	531.693	120.798	178.213	183.368	0.000	183.368
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	531.693	120.798	178.213	183.368	0.000	183.368
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	531.693	120.798	178.213	183.368	0.000	183.368
<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: AARGM is an ACAT-1C acquisition program to upgrade, and is used as a complement to, the Legacy AGM-88 HARM missile with multi-mode/multi-spectral guidance and enhanced targeting. Full-Rate Production (FRP) decision was granted on 4 September 2012 and FRP Lot 1 contract funded with FY 2012 was awarded on 10 September 2012. FRP Lot 5 contract funded with FY 2016 was awarded 3QFY2016 with deliveries commencing in January 2018.						

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Exhibit P-3a, Individual Modification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3		P-1 Line Item Number / Title: 2327 / HARM Mods			Modification Number / Title: 1 / HARM Mods (AARGM)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: AGM-88E		Modification Type: Added Capability			Related RDT&E PEs: 0205601N	
Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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: HARM Mods (AARGM)						
A Kits						
Recurring						
1.1.1) ES010 AUR Installation Kits - Organic	435 / 310.054	138 / 85.041	244 / 143.475	243 / 141.567	- / -	243 / 141.567
1.1.2) ES990 Training Equipment (CATMs) - Organic ⁽¹⁾	90 / 64.466	12 / 7.395	9 / 5.303	8 / 4.661	- / -	8 / 4.661
Subtotal: Recurring	- / 374.520	- / 92.436	- / 148.778	- / 146.228	- / -	- / 146.228
Subtotal: HARM Mods (AARGM)	525 / 374.520	150 / 92.436	253 / 148.778	251 / 146.228	- / -	251 / 146.228
Subtotal: Procurement, All Modification Items	- / 374.520	- / 92.436	- / 148.778	- / 146.228	- / -	- / 146.228
Support (All Modification Items)						
2.1) ES960 Containers ⁽²⁾	255 / 4.957	75 / 0.700	127 / 2.477	126 / 2.321	- / -	126 / 2.321
2.2) Telemetry Sections ⁽³⁾	- / -	- / -	10 / 4.400	36 / 11.700	- / -	36 / 11.700
2.3) ES970 Support Equipment ⁽⁴⁾	- / 7.366	- / 1.136	- / 0.875	- / 0.809	- / -	- / 0.809
2.4) ES700 Engineering Change Orders ⁽⁵⁾	- / 21.232	- / 2.727	- / 2.754	- / 2.480	- / -	- / 2.480
2.5) ES930 Production Engineering Support ⁽⁶⁾	- / 37.295	- / 5.576	- / 5.623	- / 5.679	- / -	- / 5.679
2.6) Non-Recurring Engineering	- / 4.111	- / -	- / -	- / -	- / -	- / -
2.7) ES970 Integrated Logistics Support ⁽⁷⁾	- / 18.814	- / 1.461	- / 1.461	- / 1.478	- / -	- / 1.478
2.8) ES950 Other Production Support ⁽⁸⁾	- / 43.620	- / 7.771	- / 7.396	- / 7.425	- / -	- / 7.425
2.9) ES400 ST/STE for Production Facilitization ⁽⁹⁾	- / 17.240	- / 7.294	- / 3.119	- / 3.482	- / -	- / 3.482
2.10) ES260 Diminishing Manufacturing Sources (DMS) ⁽¹⁰⁾	- / 2.538	- / 1.697	- / 1.330	- / 1.766	- / -	- / 1.766
Subtotal: Support	- / 157.173	- / 28.362	- / 29.435	- / 37.140	- / -	- / 37.140
Installation						
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -
Total						
Total Cost (Procurement + Support + Installation)	531.693	120.798	178.213	183.368	0.000	183.368

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Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 3		P-1 Line Item Number / Title: 2327 / HARM Mods	
		Modification Number / Title: 1 / HARM Mods (AARGM)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 1: HARM Mods (AARGM)			
Manufacturer Information			
Manufacturer Name: Orbital ATK		Manufacturer Location: Northridge, CA	
Administrative Leadtime <i>(in Months)</i> : 7		Production Leadtime <i>(in Months)</i> : 20	
Dates	FY 2016	FY 2017	FY 2018
Contract Dates	May 2016	May 2017	May 2018
Delivery Dates	Jan 2018	Jan 2019	Jan 2020

Footnotes:

- (1) Budget reflects requirements and updates based on contract actuals, adjusting quantity and unit costs. CATMs are based on the analysis of operational fleet training requirements.
- (2) Procuring one container for every two AUR missiles and/or CATMs.
- (3) Telemetry Sections provide the data required to assess flight testing and provide the flight termination capability required for range safety during live firings on United States Navy ranges. Funding is required to meet Noncombat Expenditure Allocation requirements.
- (4) Support equipment includes Common Munitions Bit/Reprogramming Equipment (CMBRE), unique support equipment, and radome covers.
- (5) Engineering change orders (ECO) are used for the Cost Improvement Initiatives (CII), safety, and engineering change proposals (ECPs) to add capability, reduce missile cost and improve production.
- (6) Production Engineering Support (PES) reflect field activity requirements as stated the approved FRP decision.
- (7) Integrated Logistics Support (ILS) budget line supports costs of maintenance, supply support, support equipment management, computer resources support, training and training support, ILS program management, and Packaging, Handling, Storage and Transportation (PHS&T).
- (8) Other Production Support (OPS) includes prime contractor production support and recurring fixed costs that are required per lot. Funding profile for OPS reflect requirements and updated based on contract actuals.
- (9) Special Tooling/Special Test Equipment (ST/STE) for production facilitization includes rate tooling to meet production ramp each year as well as planning, building, installing, maintaining, calibrating, repairing and replacing of ST/STE and production equipment.
- (10) Diminishing Manufacturing Sources (DMS) added to comply with Congressional direction, H.R. 933. DMS funding includes life-of-type buys due to obsolescence parts and components and other obsolescence issue resolutions. Funding reflects the programs projected obsolescence issues and can vary from year to year.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 3: Modification of Missiles							P-1 Line Item Number / Title: 2356 / Standard Missiles Mods					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	748.190	0.000	8.164	11.729	0.000	11.729	11.910	12.130	105.047	207.550	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	748.190	0.000	8.164	11.729	0.000	11.729	11.910	12.130	105.047	207.550	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	748.190	0.000	8.164	11.729	0.000	11.729	11.910	12.130	105.047	207.550	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: SM-2 BLK IIIAZ: The DDG 1000 Standard Missile program of record plan is to procure SM-2 BLK IIIAZ modifications to support deployment of DDG 1000 Class Ships. This line item provides funds to procure SM-2 modification kits to support the DDG 1000 program. FY 2017 is the first year for SM-2 BLK IIIAZ procurement. FY 2017 - 2020 funding supports procurement of Standard Missile modifications to provide SM-2 BLK IIIAZ missiles for DDG 1000 Standard Missile in-service inventory requirement. Funding includes modification kit installation in SM-2 BLK IIIA rounds. SM-2 BLK IIIA AEGIS missiles require hardware and software changes to be compatible with the new (non-AEGIS) DDG 1000 radar, combat system, X-band link and interrupted continuous wave illumination. SM-2 ACTIVE: SM-2 Improvements will bring the SM-2 medium range missile into the family of active missiles as an active MR missile. SM-2 Active (or SM-6 MR) provides enhanced Stream-Raid performance against numerous threats to include agile prism via target resolution in range and Doppler and missile/target pairing logic, over-the-horizon capability for increased depth of fire, enhanced capability against electronic attack, improved firepower due to decreased dependence on illuminators, and enhanced fuzing via guidance integrated fuzing. Effort leverages to the maximum extent existing SM-6 infrastructure and industrial manufacturing capability. The inventory objective is 1,000 units. Justification: SM-2 BLK IIIAZ: Funding will procure 33 modification kits in FY 2018 to modify SM-2 missiles currently in inventory to meet the requirements for DDG 1000 in-service inventory.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities							P-1 Line Item Number / Title: 2420 / Weapons Industrial Facilities					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	331.257	2.397	1.964	4.021	0.000	4.021	2.063	2.107	2.149	2.193	-	348.151
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	331.257	2.397	1.964	4.021	0.000	4.021	2.063	2.107	2.149	2.193	-	348.151
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	331.257	2.397	1.964	4.021	0.000	4.021	2.063	2.107	2.149	2.193	-	348.151
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This budget provides funding to close, deactivate, prepare, and convey the Government-Owned Contractor Operated (GOCO), Naval Weapons Industrial Reserve Plant (NWIRP) in Bedford, MA. This budget also provides funding which supports capital-type rehabilitation projects in the areas of environmental, safety, major repair, and energy conservation at the active Naval Industrial Reserve Ordnance Plant (NIROP), Allegany Ballistics Laboratory (ABL), and inactive NWIRP. Capital-type rehabilitation projects at the GOCO plant, NIROP ABL in Rocket Center, WV, supports weapons systems such as LRLAP, RAM, ESSM, AIM-9X, AIM-9M, FMU-139 Fuze, Hellfire, GMLRS, AMRAAM, Tomahawk GG and Trident GG.

[P5 / FU002 Capital Type Rehabilitation]: This program funds projects that eliminate environmental deficiencies to comply with local, state, and federal OSHA regulations. These regulations mandate requirements, which must be met if plant shutdowns in order to avoid criminal liability, and severe financial penalties. Projects to eliminate safety deficiencies in compliance with local, state, and federal OSHA regulations are also funded by this program. These regulations mandate requirements, which must be met if plant shut-downs in order to avoid severe financial penalties. The program also includes critical upgrades to maintain high liability areas such as fire and security systems, roofs, boilers, electrical distribution systems, bridge crane systems, and other structural repairs essential to maintain the industrial integrity of the plant. This line also supports projects that decrease energy consumption by installing new energy efficient systems and provides increased maintenance on these systems. Mandated in 1993 by Congress (Defense Appropriations Committee).

Justification:

Funding is required to address critical infrastructure issues. The plants have an average age of 45 years and lack of proper maintenance will limit capabilities to maintain scheduled production rates and overall productivity.

Funding increase of \$2.000M for FY 2018 will support security upgrades and improvements at NIROP ABL to meet modern standards for Anti-Terrorism and Force Protection. This will include upgrades to the following ABL security infrastructure: visitor and entrance control facilities for Plant 1 and the Hilltop Complex, expanded coverage of closed circuit TV monitoring systems, plant security fencing, security lighting including perimeter and area lighting, security patrol access roads and vehicle control measures. Execution of this project will ensure the safety and security of all personnel at the facility.

Federal Acquisition Regulation Part 52.245-7 specifies that facilities use contracts require that the government fund capital type rehabilitation projects to support and maintain these facilities. Funding is separated to reflect environmental, safety, major repair, energy conservation, and facilities restoration.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities							P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A				Other Related Program Elements: 0303109N, 1203109N					
Line Item MDAP/MAIS Code: 345												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,031.065	35.961	36.723	46.357	0.000	46.357	68.018	70.225	55.935	48.248	328.733	2,721.265
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,031.065	35.961	36.723	46.357	0.000	46.357	68.018	70.225	55.935	48.248	328.733	2,721.265
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,031.065	35.961	36.723	46.357	0.000	46.357	68.018	70.225	55.935	48.248	328.733	2,721.265
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Mobile User Objective System (MUOS) provides a worldwide, multi-service population of mobile and fixed-site terminal users with ultra-high frequency (UHF), narrowband, beyond line of sight satellite communications (SATCOM). MUOS significantly increases performance and capacity in support of critical Combatant Command SATCOM priorities. MUOS is the replacement system for the UHF Follow-on (UFO) system, which is currently beyond its design life. MUOS consists of Space, Ground, and User Entry Segments. The Space Segment consists of 5 geosynchronous satellites, one which is an on-orbit spare, and provides both a legacy UHF payload, which is backward compatible with UFO, and a Wideband Code Division Multiple Access (WCDMA) payload, which provides 3G cellular-like capability. The Ground Segment or System consists of four world-wide radio access facilities (RAFs) and two satellite control facilities. Each RAF includes three 60 ft. antennas, and over 50 equipment racks which house a total of 5,000 major hardware components and 250 software applications across the MUOS Program. The RAF in Hawaii includes a Network Management Facility (NMF). The RAFs in Hawaii and Virginia each include a Switching Facility (SF). The User Entry Segment consists of the MUOS waveform that is ultimately integrated into MUOS-capable terminals. The MUOS legacy capability has been in operational use since 2012, and the WCDMA capability transitioned to Early Combatant Command Use in July 2016.

In addition to providing UHF SATCOM for the Department of Defense (DoD), the Navy has the overall responsibility to deliver the end-to-end (E2E) MUOS capability to the warfighter. This responsibility involves systems engineering, integration, and test management of all MUOS system of system activities, to include the integration of the MUOS waveform into MUOS-capable terminals and the subsequent terminal certification testing.

In June 2016 based on the results of the Multi-Service Operational Test and Evaluation-2 (MOT&E-2), Director, Operational Test & Evaluation (DOT&E) assessed MUOS not operationally effective or suitable. As a result the program is addressing the findings and preparing for MOT&E-2B in FY19 and Full Operational Capability (FOC) has been moved to FY20. Beginning in FY17, the program's focus has been updating all four radio access facilities and two satellite control facilities to address cybersecurity requirements, tech refresh of obsolescent hardware and software, and operational deficiencies.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 4: Support Equipment & Facilities						P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: 0303109N, 1203109N				
Line Item MDAP/MAIS Code: 345										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Fleet Satellite Comm Follow-On				- / 2,031.065	- / 35.961	- / 36.723	- / 46.357	- / 0.000	- / 46.357
P-40	Total Gross/Weapon System Cost				- / 2,031.065	- / 35.961	- / 36.723	- / 46.357	- / 0.000	- / 46.357
*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: Program funding increased from FY17 to FY18 as a result of MUOS Ground System obsolescence and associated cybersecurity vulnerabilities. The Ground System completed fielding in 2012, and currently 46% of the hardware (HW) and 96% of the software (SW) is obsolete. Emerging cybersecurity threats and increasing cybersecurity requirements have resulted in over 700 category I/II cybersecurity vulnerabilities, of which 12% are directly attributable to obsolescence. Resolution of the category I cybersecurity vulnerabilities is required by USSTRATCOM to fully transition the system to operations. FY18 MUOS WPN funding will address obsolescence and cybersecurity requirements for IA specific items as well as items beyond end of support. The FY18 WPN budget continues to fund Ground System updates, including HW/SW procurements, and correction of hardware and software issues resulting from MOT&E findings, trouble tickets, and/or problem change requests. FY18 funds 1 major Ground System release and 6 minor releases deployed to each of the Ground sites, and includes associated engineering, integration, test and delivery efforts to address obsolescence, cybersecurity vulnerabilities, and ensure readiness levels support the warfighter narrowband SATCOM requirements. Additional efforts in FY18 include the phased replacement of the following equipment items in order to address obsolescence: Earth Terminal Interface Signal Processor (ETISP) - The three ETISPs per RAF are beyond the end of support, have high failure rates and long down times due to difficulty in troubleshooting, and are high risk to Wideband Code Division Multiple Access (WCDMA) availability. This effort also provides technology refresh that increases capability to address electromagnetic interference issues with MUOS communications. MUOS TRANSEC Controller (MTC) - The two MTCs per RAF are beyond end of support, have a failure rate that is expected to consume all spares by end of FY 19, and are high risk to satellite command and control operational availability. Anti-Jam Modem (AJM) - The two AJMs per RAF are beyond end of life, approaching end of support, and have a failure rate expected to consume all spares by end of FY 19. These are high risk to satellite command and control operational availability. Defense Switch Network Gateway (DSNG) - The DSN Gateway in each Switch Facility is beyond end of support, and does not support the Internet Protocol Defense Switch Network (DSN) interface that DISA has transitioned to. This results in DISA continuing to support legacy protocol for MUOS and four other programs. This increases risk to providing DSN MUOS voice capability via DISA Teleport and DSN services. Information Assurance Components - Network Intrusion Devices and Ground System back-up/restoral devices are beyond end of support. This obsolescence effort addresses cybersecurity requirements.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4							P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On						Item Number / Title [DODIC]: 1 / Fleet Satellite Comm Follow-On								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				2,031.065			35.961			36.723			46.357			0.000			46.357		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				2,031.065			35.961			36.723			46.357			0.000			46.357		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				2,031.065			35.961			36.723			46.357			0.000			46.357		
(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>				-			-			-			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)			
Flyaway Cost																					
Recurring Cost																					
1.1.1) Ground System Updates ⁽¹⁾	-	-	100.915	-	-	29.922	-	-	36.723	-	-	46.357	-	-	-	-	-	46.357			
Subtotal: Recurring Cost	-	-	100.915	-	-	29.922	-	-	36.723	-	-	46.357	-	-	-	-	-	46.357			
Non Recurring Cost																					
1.2.1) Advance Procurement Prior Years (FY2001-2010)	-	-	118.858	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
1.2.2) Satellite Procurement (MUOS)	300,796.667	3	902.390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Non Recurring Cost	-	-	1,021.248	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Flyaway Cost	-	-	1,122.163	-	-	29.922	-	-	36.723	-	-	46.357	-	-	-	-	-	46.357			
Hardware Cost																					
Non Recurring Cost																					
2.1.1) EELV Launch Vehicles (MUOS)	147,092.800	5	735.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Non Recurring Cost	-	-	735.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Subtotal: Hardware Cost	-	-	735.464	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Support Cost																					
3.1) EELV Launch Vehicle Production	-	-	34.687	-	-	2.658	-	-	-	-	-	-	-	-	-	-	-	-			

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 4						P-1 Line Item Number / Title: 2433 / Fleet Satellite Comm Follow-On							Item Number / Title [DODIC]: 1 / Fleet Satellite Comm Follow-On					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
	3.2) Satellite Production	-	-	138.751	-	-	3.381	-	-	-	-	-	-	-	-	-	-	-
	Subtotal: Support Cost	-	-	173.438	-	-	6.039	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	-	-	2,031.065	-	-	35.961	-	-	36.723	-	-	46.357	-	-	0.000	-	-	46.357

Footnotes:

(1) The Ground System Updates line includes equipment for the entire MUOS Ground system, which includes 4 Remote Access Facilities (or Ground Stations) and 2 Satellite Control Facilities.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 5: Ordnance Support Equipment							P-1 Line Item Number / Title: 2500 / Ordnance Support Equipment					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	321.556	34.442	59.096	47.159	0.000	47.159	48.073	170.445	216.471	221.763	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	321.556	34.442	59.096	47.159	0.000	47.159	48.073	170.445	216.471	221.763	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	321.556	34.442	59.096	47.159	0.000	47.159	48.073	170.445	216.471	221.763	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 5: Ordnance Support Equipment						P-1 Line Item Number / Title: 2500 / Ordnance Support Equipment				
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A			Other Related Program Elements: N/A			
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Ordnance Support Equipment				- / 321.556	- / 34.442	- / 59.096	- / 47.158	- / -	- / 47.158
P-40	Total Gross/Weapon System Cost				- / 321.556	- / 34.442	- / 59.096	- / 47.159	- / 0.000	- / 47.159
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Title represents the P-40a Title when only the P-40a Summary/Total is shown.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Navy															Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 5							P-1 Line Item Number / Title: 2500 / Ordnance Support Equipment							Aggregated Items Title: Ordnance Support Equipment ⁽¹⁾						
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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) Ordnance Support Equipment																				
1) Classified	A		-	-	321.556	-	-	34.442	-	-	59.096	-	-	47.158	-	-	-	-	-	47.158
Subtotal: 1) Ordnance Support Equipment			-	-	321.556	-	-	34.442	-	-	59.096	-	-	47.158	-	-	-	-	-	47.158
Total			-	-	321.556	-	-	34.442	-	-	59.096	-	-	47.158	-	-	-	-	-	47.158

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

Footnotes:

⁽¹⁾ Additional details with respect to this line item are held at a higher classification. This line item is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip							P-1 Line Item Number / Title: 3113 / Surface Ship Torpedo Def (SSTD)					
ID Code (A=Service Ready, B=Not Service Ready): B				Program Elements for Code B Items: N/A				Other Related Program Elements: 0603506N, 0204228N				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	23.275	5.580	5.910	5.240	0.000	5.240	6.578	6.317	5.926	6.047	-	64.873
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	23.275	5.580	5.910	5.240	0.000	5.240	6.578	6.317	5.926	6.047	-	64.873
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	23.275	5.580	5.910	5.240	0.000	5.240	6.578	6.317	5.926	6.047	-	64.873
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Surface Ship Torpedo Defense (SSTD) WPN account procures surface ship Acoustic Device Countermeasures (ADCs). The ADC is a 3-inch expendable torpedo countermeasure (CM) that provides an over-the-side soft-kill defense against threat torpedoes. WPN funding provides new devices for fleet inventory requirements as identified in Naval Munitions Requirements Process (NMRP) necessary to equip identified surface ships and to replace expiring devices. The funding will also procure and install ready service and deep storage lockers to provide adequate storage on surface ships with countermeasure allowance. TD010 - ADC HARDWARE Procures the surface ship Acoustic Device Countermeasures (ADC). Quantity requirements determined by NMRP and shelf life of older units (reaching end of life). These requirements vary by ship type, location, and campaign. TD020 - ADC READY STOWAGE LOCKER Procures the Ship Change Document (SCD) package, procure and install ready service and deep storage lockers to hold ADCs on surface ships. TD830 - PRODUCTION ENGINEERING - In House Funding provides specification preparation and validation, government prepared production acceptance procedures, production planning, ILS planning, coordination of government furnished information (GFI) and government furnished equipment (GFE), contract deliverable monitoring and prime contractor monitoring of cost/schedule performance. Also provides inservice engineering agent (ISEA) and technical direction agent (TDA) support for ADCs on surface ships. TD900 - CONSULTING SERVICES Funding under this cost code provides fair share of contractor support to the program office, including program, financial, acquisition, contract, administration and engineering management support. TD905 - PRODUCTION ENGINEERING CONTRACTOR Funding under this cost code provides for production engineering tasks performed by the hardware contractor.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip							P-1 Line Item Number / Title: 3117 / MK-48 Torpedo					
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	8	11	17	-	17	25	34	42	50	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2.153	60.438	44.537	44.771	0.000	44.771	75.993	101.046	177.523	164.289	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2.153	60.438	44.537	44.771	0.000	44.771	75.993	101.046	177.523	164.289	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2.153	60.438	44.537	44.771	0.000	44.771	75.993	101.046	177.523	164.289	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	7,555K	4,049K	2,634K	-	2,634K	3,040K	2,972K	4,227K	3,286K	Continuing	Continuing
Description: The MK 48 Mod 7 Heavyweight Torpedo is the U.S. Navy's submarine launched Anti-Submarine Warfare (ASW) and primary Anti-Surface Warfare (ASuW) weapon. Procurements will increase warshot inventory available prior to Major Combat Operations. Heavyweight Torpedo provides the submarine force with an effective weapon against threat submarines and surface combatants to assist in achieving Sea Control and neutralizing or destroying threats to high value vessels. Torpedoes are the only proven weapon system that provides Navy control from sea bed to sea surface. [P5 / G5001 - Hardware]: Funding under this cost code supports the award of two competitive contracts for the MK48 Mod 7 Torpedo Guidance and Control and Afterbody Tail Cone Sections from the prime contractors, production test equipment upgrades, engineering change proposals, and non-recurring engineering to resolve production issues including obsolescence. Nonrecurring Engineering (NRE) funds base contract year technology refresh due to obsolescence issues and non-deliverable hardware consumed in production acceptance testing. In FY 2016, NRE funds production of 6 Proof of Manufacturing (POM) units, POM unit government testing, first article testing, tooling, test equipment, procurement of technical data package updates, and start-up costs for production contractors. Engineering Services and Engineering Change Proposals (ECPs) pay for studies, plans, design changes, and implementation of design changes by the contractor(s), primarily due to obsolescence that occurs during the contract performance. Also included in this cost code, is the cost of government installation and integration of MK 48 Mod 7 Guidance and Control and Afterbody Tail Cone Torpedo Sections procured in prior years and is integrated with War Reserve MK 48 Mod 4 MK 107 Warhead components and Fuel Tanks into an all up round(AUR) and is then loaded with the operational software and completes quality assurance check-out prior to issue of the MK 48 Mod 7 Torpedo as Warshot or Exercise Torpedo. Diminishing Manufacturing Sources (DMS) cost funds are provided to address obsolescence issues in the Guidance and Control (G&C) and After Body/Tail Cone sections during the production cycle. The contractors will be required to procure and deliver DMS material for these obsolete components. [P5 / G5003 - Support and Ancillary Equipment]: Funding under this cost code provides procurement and maintenance of support, technology refresh of test equipment at Naval Undersea Warfare Centers (NUWC) Keyport (KPT) and Newport (NPT), and the contractor facility for assembly, testing and integration. [P5 / G5830 - Production Engineering]: Funding under this cost code provides for production tasks performed by NUWC NPT and KPT and includes review of contractor generated Engineering Change Proposals (ECPs), review and resolution of contractor failures and proposed corrective action, configuration management activities, contractor monitoring, risk analysis, technical problem resolution, software engineering, safety, integrated logistics support, environmental engineering, information systems, test equipment, software maintenance and updates, and refurbishment of notable test equipment to provide to the contractors. Funding maintains production specification in accordance with production processes, provides subject matter experts to support root cause analysis of failed contractor hardware, and monitors contractor defect and reduction processes to ensure deficiencies are effectively addressed. Funding is also provided for program office acquisition support.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip		P-1 Line Item Number / Title: 3117 / MK-48 Torpedo
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		
[P5 / G5840 - Quality Assurance]: Funding under this cost code provides for quality assurance (QA) tasks performed by NUWC Keyport (KPT) and Newport (NPT) including: QA review of the contractor and subcontractor data, review of documentation indicating conformity to product performance requirements, and review of objective quality evidence. [P5 / G5860 - Acceptance T&E]: Funding under this cost code provides for integration and production acceptance testing and of prime contractor hardware sections into an MK 48 Mod 7 All Up Round (AUR) Torpedo.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy							Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip					P-1 Line Item Number / Title: 3117 / MK-48 Torpedo					
ID Code (A=Service Ready, B=Not Service Ready): B			Program Elements for Code B Items: N/A				Other Related Program Elements: N/A			
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / MK-48 Torpedo	P-5a, P-21			- / 2.153	8 / 60.438	11 / 44.537	17 / 44.771	- / 0.000	17 / 44.771
P-40	Total Gross/Weapon System Cost				- / 2.153	8 / 60.438	11 / 44.537	17 / 44.771	- / 0.000	17 / 44.771
*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:

G5860: Funding added in FY 2018 for Proof of Manufacturing (POM) unit acceptance and testing.

G5001: Unit cost is based on contract stepladder pricing.

Engineering Services/ECP increase to initiate warhead electronics section to redesign due to significant obsolescence, starting the redesign in FY18 allows for completion of the design update and extensive safety testing to allow TAIS functional item placement to be added to the next contract RFP in FY 2020.

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Exhibit P-5, Cost Analysis: FY 2018 Navy											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1						P-1 Line Item Number / Title: 3117 / MK-48 Torpedo						Item Number / Title [DODIC]: 1 / MK-48 Torpedo						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				-		8		11		17		-		17				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				2.153		60.438		44.537		44.771		0.000		44.771				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				2.153		60.438		44.537		44.771		0.000		44.771				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				2.153		60.438		44.537		44.771		0.000		44.771				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-		7,555K		4,049K		2,634K		-		2,634K				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - G5001 - Hardware Cost																		
Recurring Cost																		
1.1.1) Guidance & Control (G&C) Section ⁽¹⁾ (1)	-	-	-	1,418K	8	11.347	1,491K	11	16.406	670,626.00	17	11.401	-	-	-	670,626.00	17	11.401
1.1.2) After Body/Tail Cone ⁽¹⁾ (2)	-	-	-	933,250.00	8	7.466	887,947.37	11	9.767	816,797.00	17	13.886	-	-	-	816,797.00	17	13.886
1.1.3) Engineering Services / ECPs ⁽³⁾	-	-	-	-	-	6.402	-	-	8.792	-	-	9.205	-	-	-	-	-	9.205
1.1.5) Diminshing Manufacturing Sources ⁽⁴⁾	-	-	-	-	-	1.000	-	-	1.000	-	-	0.500	-	-	-	-	-	0.500
Subtotal: Recurring Cost	-	-	-	-	-	26.215	-	-	35.965	-	-	34.992	-	-	-	-	-	34.992
Non Recurring Cost																		
1.2.1) Non Recurring Engineering	-	-	-	-	-	31.645	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	-	-	-	31.645	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - G5001 - Hardware Cost	-	-	-	-	-	57.860	-	-	35.965	-	-	34.992	-	-	-	-	-	34.992
Support - G5003 - Support and Ancillary Equipment Cost																		
2.1) Support and Ancillary Equipment	-	-	0.985	-	-	0.385	-	-	1.223	-	-	1.247	-	-	-	-	-	1.247

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1						P-1 Line Item Number / Title: 3117 / MK-48 Torpedo							Item Number / Title [DODIC]: 1 / MK-48 Torpedo					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Subtotal: Support - G5003 - Support and Ancillary Equipment Cost	-	-	0.985	-	-	0.385	-	-	1.223	-	-	1.247	-	-	-	-	-	1.247
Support - G5830 - Production Engineering Cost																		
3.1) Production Engineering (In-House & Ctr)	-	-	1.168	-	-	2.193	-	-	6.253	-	-	6.378	-	-	-	-	-	6.378
Subtotal: Support - G5830 - Production Engineering Cost	-	-	1.168	-	-	2.193	-	-	6.253	-	-	6.378	-	-	-	-	-	6.378
Support - G5840 - Quality Assurance Cost																		
4.1) Quality Assurance	-	-	-	-	-	-	-	-	1.096	-	-	1.118	-	-	-	-	-	1.118
Subtotal: Support - G5840 - Quality Assurance Cost	-	-	-	-	-	-	-	-	1.096	-	-	1.118	-	-	-	-	-	1.118
Support - G5860 - Acceptance T&E Cost																		
5.1) Acceptance T&E	-	-	-	-	-	-	-	-	-	-	-	1.036	-	-	-	-	-	1.036
Subtotal: Support - G5860 - Acceptance T&E Cost	-	-	-	-	-	-	-	-	-	-	-	1.036	-	-	-	-	-	1.036
Gross/Weapon System Cost	-	-	2.153	7,555K	8	60.438	4,049K	11	44.537	2,634K	17	44.771	-	-	0.000	2,634K	17	44.771

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

Footnotes:

(1) FY 2018 funding increase for the procurement of 17 Guidance & Control (G&C) sections.

(2) FY 2018 funding increase for the procurement of 17 After Body/Tail Cones.

(3) Funds are provided to fund plans, design changes, and implementation of design changes at the contractor level primarily due to obsolescence that occurs during the contract performance for two prime contractors; one for Guidance and Control and After Body and the other for the Tail Cone sections.

(4) DMS: Funds are provided to address obsolescence issues in the Guidance and Control (G&C) and After Body/Tail Cone sections during the production cycle. The contractors will be required to procure and deliver DMS material for these obsolete components.

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1				P-1 Line Item Number / Title: 3117 / MK-48 Torpedo				Item Number / Title [DODIC]: 1 / MK-48 Torpedo			

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Guidance & Control (G&C) Section ^(†)		2016	G&C Section LMS - FY16 ⁽⁵⁾ / Marion, MA	C / FFP	NAVSEA	May 2016	May 2019	8	1,418K	Y		May 2015
1.1.1) Guidance & Control (G&C) Section ^(†)		2017	G&C Section LMS - FY17 ⁽⁶⁾ / Marion, MA	C / FFP	NAVSEA	May 2017	Jan 2020	11	1,491K	Y		
1.1.1) Guidance & Control (G&C) Section ^(†)		2018	G&C Section LMS - FY18 ⁽⁷⁾ / Marion, MA	C / FFP	NAVSEA	May 2018	Jul 2020	17	670,626.00	Y		
1.1.2) After Body/Tail Cone ^(†)		2016	Afterbody/Tail Cone Section SAIC - FY16 / Mclean, VA	C / FFP	NAVSEA	Sep 2016	Jun 2019	8	933,250.00	Y		Jul 2015
1.1.2) After Body/Tail Cone ^(†)		2017	Afterbody/Tail Cone Section SAIC - FY17 / Mclean, VA	C / FFP	NAVSEA	Jul 2017	Dec 2019	11	887,947.37	Y		
1.1.2) After Body/Tail Cone ^(†)		2018	Afterbody/Tail Cone Section SAIC - FY18 / Mclean, VA	C / FFP	NAVSEA	Jul 2018	Jun 2020	17	816,797.00	Y		

^(†) indicates the presence of a P-21

Footnotes:

⁽⁵⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁶⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁷⁾ MSR and EOQ have not yet been determined by the contractor.

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1										P-1 Line Item Number / Title: 3117 / MK-48 Torpedo										Item Number / Title [DODIC]: 1 / MK-48 Torpedo																
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) Guidance & Control (G&C) Section ⁽¹⁾																																				
	1	2016	NAVY		8	0	8											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
	2	2017	NAVY		11	0	11																								A -	-	-	-	-	11
	3	2018	NAVY		17	0	17																										17			
1.1.2) After Body/Tail Cone ⁽²⁾																																				
	4	2016	NAVY		8	0	8											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
	5	2017	NAVY		11	0	11																								A -	-	-	-	11	
	6	2018	NAVY		17	0	17																										17			
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1										P-1 Line Item Number / Title: 3117 / MK-48 Torpedo													Item Number / Title [DODIC]: 1 / MK-48 Torpedo									
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018												Fiscal Year 2019												BALANCE	
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019													
							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) Guidance & Control (G&C) Section ⁽¹⁾																																
	1	2016	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	3	
	2	2017	NAVY	11	0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	
	3	2018	NAVY	17	0	17								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	
1.1.2) After Body/Tail Cone ⁽²⁾																																
	4	2016	NAVY	8	0	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	4
	5	2017	NAVY	11	0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
	6	2018	NAVY	17	0	17								A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017											
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1										P-1 Line Item Number / Title: 3117 / MK-48 Torpedo										Item Number / Title [DODIC]: 1 / MK-48 Torpedo											
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020										Fiscal Year 2021														BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021														
							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) Guidance & Control (G&C) Section ⁽¹⁾																															
	1	2016	NAVY	8	5	3	1	1	1																					0	
	2	2017	NAVY	11	0	11	-	-	-	2	2	2	2	1	1	1											0				
	3	2018	NAVY	17	0	17	-	-	-	-	-	-	-	-	-	2	2	2	2	3	3	3							0		
1.1.2) After Body/Tail Cone ⁽²⁾																															
	4	2016	NAVY	8	4	4	1	1	1	1																					0
	5	2017	NAVY	11	0	11	-	-	2	2	2	2	1	1	1											0					
	6	2018	NAVY	17	0	17	-	-	-	-	-	-	-	-	2	2	3	3	3	2	2							0			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 1					P-1 Line Item Number / Title: 3117 / MK-48 Torpedo				Item Number / Title [DODIC]: 1 / MK-48 Torpedo		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	G&C Section LMS - FY16 ⁽⁵⁾ - Marion, MA	TBD	TBD	50	0	0	36	36	0	0	0	0
2	G&C Section LMS - FY17 ⁽⁶⁾ - Marion, MA	TBD	TBD	50	0	0	32	32	0	0	0	0
3	G&C Section LMS - FY18 ⁽⁷⁾ - Marion, MA	TBD	TBD	50	0	0	26	26	0	0	0	0
4	Afterbody/Tail Cone Section SAIC - FY16 - Mclean, VA	TBD	TBD	TBD	0	0	33	33	0	0	0	0
5	Afterbody/Tail Cone Section SAIC - FY17 - Mclean, VA	TBD	TBD	TBD	0	0	29	29	0	0	0	0
6	Afterbody/Tail Cone Section SAIC - FY18 - Mclean, VA	TBD	TBD	TBD	0	0	23	23	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽⁵⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁶⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁷⁾ MSR and EOQ have not yet been determined by the contractor.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip							P-1 Line Item Number / Title: 3141 / ASW Targets					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	190.318	3.353	9.302	12.399	0.000	12.399	12.573	12.799	13.036	13.269	-	267.049
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	190.318	3.353	9.302	12.399	0.000	12.399	12.573	12.799	13.036	13.269	-	267.049
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	190.318	3.353	9.302	12.399	0.000	12.399	12.573	12.799	13.036	13.269	-	267.049
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The MK-39 MOD 2 Expendable Mobile ASW Training Target (EMATT) is a small self-propelled underwater vehicle launched from fixed wing and rotary wing Anti-Submarine Warfare (ASW) aircraft and ASW surface ships for the purpose of providing basic, open ocean sonar training, and torpedo placement exercises. Its operation consists of a dynamic run trajectory that is actively controlled in depth and course with pre-programmable run maneuvers emulating threat submarines and is detectable by all current U.S. ASW Platforms. The MK-30 is an ASW training target for Navy surface ships, submarines, and aircrafts that are capable of simulating submarine threats anticipated in the twenty-first century littoral warfare environment. The MK-30 Service Life Extension Program (SLEP) extends the useful service life of MK-30 ASW Targets to meet annual fleet training requirements. [P5 / TG002 - MK39 MOD 2 EMATT]: Funding under this cost code provides for the procurement of MK-39 MOD 2 EMATT vehicles and nonrecurring engineering (NRE). NRE pays for the cost of Pre-Proof of Manufacturing (POM) units and POM units, first article testing, tooling and test equipment, procurement of technical data package updates, start-up costs, and other one-time costs for production contractors. [P5 / TG007 - MK30 SLEP]: Funding under this cost code provides for extending the service life for the MK-30 ASW Targets. [P5 / TG832 - MK39 MOD 2 EMATT PROD ENG (IN-HOUSE)]: Funding under this cost code provides for production engineering tasks performed by NUWC NPT and KPT including EMATT program management support, systems engineering, and production engineering. [P5 / TG842 - MK39 MOD 2 EMATT QUALITY ASSURANCE]: Funding under this cost code provides for quality assurance efforts in support of the EMATT program. [P5 / TG862 - MK39MOD 2 EMATT ACCEPTANCE T&E]: Funding under this cost code provides for production acceptance of contractor hardware for the EMATT program. [P5 / TG900 - MK39 MOD 2 EMATT CONSULTING SERVICES]: Funding under this cost code provides for contractor support services at the program office.												
Justification:												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 1: Torpedoes and Related Equip		P-1 Line Item Number / Title: 3141 / ASW Targets
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		
FY 2018: TG002: Increases in MK-39 MOD 2 EMATT Targets to procure 1,000 EMATT targets to recover from very low inventory levels to meet Non-Combat Expenditure Allocations (NCEA) and to meet future Fleet ASW Training Requirements. The unit price reflects actual contract unit price for EMATT. Unit price is stepladder, so minor funding changes may result in large quantity changes. TG007: The funding increase in the MK-30 MOD 1 Service Life Extension Program (SLEP), which extends the MK-30 MOD 1 ASW Target Service Life to continue the use of MK-30 ASW Target for the foreseeable future, addresses future Submarine Force ASW Fleet Training requirements due to the cancellation of the Advanced Expendable ASW Training Target MK-1 MOD 0 Parrotfish program.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (Units in Each)	651	-	-	-	-	-	-	-	-	-	-	651
Gross/Weapon System Cost (\$ in Millions)	880.857	113.219	98.092	104.044	0.000	104.044	116.963	128.946	143.892	146.788	-	1,732.801
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	880.857	113.219	98.092	104.044	0.000	104.044	116.963	128.946	143.892	146.788	-	1,732.801
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	880.857	113.219	98.092	104.044	0.000	104.044	116.963	128.946	143.892	146.788	-	1,732.801
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	15.524	4.714	16.606	-	16.606	7.038	2.051	3.738	4.106	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	1,353K	-	-	-	-	-	-	-	-	-	-	2,662K
Description:												
This line item procures MK-54 Mod 0 Torpedo kits, MK-54 Mod 1 Torpedo kits, MK-54/Vertical Launch Anti-submarine Rocket (VLA) conversion kits, and VLA components. The MK-54 Mod 0 Light Weight Torpedo (LWT) maximizes the use of Non-Developmental Item (NDI) technologies, incorporating the proven technologies from existing torpedo programs with state of the art Commercial-Off-The-Shelf (COTS) processors and is a modular upgrade to LWT inventory. MK-54 Mod 1 builds on the MK-54 Mod 0 improvements to expand the torpedoes capability in shallow water littoral environment and also improves the torpedoes counter-countermeasure capability to allow higher effectiveness in current and future threat environments. The MK-54 is an anti-submarine torpedo deployed from surface ships and ASW air platforms in littoral scenarios operating in shallow water acoustic and environmental conditions; effective in the presence of threat countermeasures and capable in deep water engagements. The procurement for both the MK 54 MOD 0 Kits and MK 54 MOD 1 Low Rate Initial Production (LRIP) kits overlap in FY 2014 and FY 2016 - FY 2018. [P5 / F5104 MK-54 MOD 0]: Funding under this cost code provides for the procurement of MK-54 Mod 0 hardware kits from the contractors (2), Engineering Change Proposals (ECPs) and Non-Recurring Engineering (NRE) to produce pre-Proof of Manufacturing (POM) units and POM units in the base year of the new contract, first article testing, product improvement, tooling and test equipment, procurement of technical data package updates and start-up costs for production contractors. One contract provides MK-54 Mod 0 kits, which includes Processor Group Assembly (PGA), Control Group Assembly (CGA), Inertial Measurements Unit (IMU), and after body components and cabling. The other contract provides for MK-54 Mod 0 Array Nose Assembly (ANA) kits (beginning in FY 2012), which consists of array receivers and transmitters. These items are assembled/installed with a MK-46 torpedo warhead and an upgraded MK-46 after body. Also included is government installation of the kits into All Up Rounds (AUR). Diminishing Manufacturing Sources (DMS) costs fund the procurement of obsolete commercial material to avoid the redesign of the electronics during the production cycle. [P5 / F5110 MK-54 MOD 1 HARDWARE]: Funding under this cost code provides for procurement of MK-54 Mod 1 hardware kits from the contractors (2), Engineering Change Proposals (ECPs) and Non-Recurring Engineering (NRE) to produce Proof of Manufacturing (POM) units, first article testing, product improvement, tooling and test equipment, procurement of technical data package updates, and start-up costs for production contractors. The MK-54 Mod 1 kits include the after body, Inertial Measurements Unit(IMU), Control Group Assembly (CGA) from the current MK-54 Mod 0 kits contract, and all new components. The new components include a 112 element array, new Processor Group Assembly (PGA), and a new transmitter. Also included is government installation of the kits into All Up Rounds (AUR). Diminishing Manufacturing Sources (DMS) costs fund the procurement of obsolete commercial material to avoid redesign of the electronics during the production cycle. [P5 / F5105 FLEET EXERCISE SYSTEMS]: Funding under this cost code provides for procurement of MK 54 Fleet Exercise Sections (FES) utilized during in-water acceptance testing of MK-54 kits, fleet exercises and developmental and operational testing.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip		P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
[P5 / F5107 MK-54/ VLA KITS]: Funding under this cost code provides for procurement of MK-54 VLA upgrade kits, associated hardware, installation costs, and the associated engineering tasks, which supports the conversion and upgrade of existing MK-46 VLA's to make them compatible with the new MK-54 Mod 0 Torpedo. The MK-54 VLA upgrade kit is comprised of an upgraded Digital Auto-Pilot Control (DAC) unit, upgraded air stabilizer, upgraded Thrust Vector Controller (TVC), new MK-54 Torpedo Downloader System (TDS) payload cable, and new nose cap. The MK-54/VLA kit procures and installs modified VLA items for MK-54 compatibility. A MK-54/VLA kit consists of modifications to the digital autopilot and air stabilizer and new nose caps and cables. Funding in this cost code also pays for the upgrade of existing VLA canisters to be compatible with the MK-54 VLA torpedo downloader capability.		
[P5 / F5109 HAAWC]: Funding under this cost code provides for procurement, Engineering Change Proposals (ECPs), and non-recurring engineering to resolve production issues including obsolescence of the MK-54 High Altitude ASW Weapon Capability (HAAWC) for the P-8 aircraft. HAAWC is an Air-Launched Accessory (ALA) that allows for employment of the MK-54 outside the current fixed wing air launch envelope. The nonrecurring cost sub-cost element depicts the cost of first article testing, product improvement, value engineering, tooling and test equipment, procurement of technical data package updates, start-up costs, and other one-time costs in the first year of production.		
[P5 / F5003 SUPPORT EQUIPMENT]: Funding under this cost code provides for procurement and maintenance of support and test equipment at Naval Undersea Warfare Centers (NUWC) Keyport and Newport, and the contractor facility for assembly, testing, and integration.		
[P5 / F5830 PRODUCTION ENGINEERING IN-HOUSE]: Funding under this cost code provides for production engineering tasks performed by NUWC Newport and Keyport and includes review of contractor generated ECPs, review and resolution of contractor failures and proposed corrective action, configuration management activities, contractor monitoring, risk analysis, technical problem resolution, software engineering, safety, integrated logistics support, environmental engineering, and information systems. Funding maintains production specification in accordance with production processes and provides subject matter experts to support root cause analysis of failed contractor hardware and monitor contractor defect resolution and reduction processes to ensure deficiencies are effectively addressed.		
[P5 / F5840 QUALITY ASSURANCE]: Funding under this cost code provides for quality assurance tasks performed by Naval Undersea Warfare Center (NUWC) Newport and Keyport including: conducting quality assurance reviews of the contractor and subcontractors, documentation indicating contractor conformity to product performance requirements, and review of objective quality evidence.		
[P5 / F5860 ACCEPT TEST & EVALUATION]: Funding under this cost code provides for production acceptance of contractor hardware.		
[P5 / F5900 PRODUCTION ENGINEERING CONTRACTOR]: Funding under this cost code provides for contractor support to the program office.		
[P5 / F5103 FIELD SUPPORT OPERATIONS]: Funding previously allocated for field support tasks to upgrade MK-46 Torpedo VLA to MK-54 Mod 0 Torpedo VLA.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / MK-54 Torpedo Mods	P-5a, P-21			651 / 880.857	- / 113.219	- / 98.092	- / 104.044	- / 0.000	- / 104.044
P-40	Total Gross/Weapon System Cost				651 / 880.857	- / 113.219	- / 98.092	- / 104.044	- / 0.000	- / 104.044
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: FY 2018 program funding changes: - COST CODE F5104 ITEM 1.1.1 MK 54 KITS MOD 0 HARDWARE: funding increase is due to stepladder pricing on a new contract for MK 54 Mod 0 Kits and for Arrays Kits. - COST CODE F5104 ITEM 1.1.3 MK 54 MOD 0 Kit Installation: The program will install procured kits delivered per the P-21 exhibit. In FY 2018, 28 Kits installed. - COST CODE F5104 ITEM 1.2.1 M54 Mod 0 NRE: Funds increase in FY 2018 for Non-Recurring Efforts to procure initial Proof of Manufacturing (POM Units) /First Article units for the new MK 54 Mod 0 Array competitive contract that is planned to award in FY 2018. - COST CODE F5110 ITEM 2.1.2 MK 54 MOD 1 DIMINISHING MANUFACTURING SOURCES: Funds are provided to address obsolescence issues in the Control Group Assembly (CGA), Inertial Measurements Unit (IMU), Afterbody components and MK 54 Mod 1 Array receivers and transmitter, Processing Group Assembly (PGA), and cabling during the production cycle. The contractors will be required to procure and deliver DMS material for these obsolete components. - COST CODE F5110 ITEM 2.1.4 MK 54 MOD 1 INSTALLATION: Funding provides for government installation of the MK 54 Mod 1 kits and Afterbodies into All Up Rounds(AUR) as shown on the P-21. Installation occurs one month after delivery and the installation is budgeted for in the year the installation is planned to occur. MK 54 Mod 1 kit are planned to start installing in FY 2018 for a total of 36 kits.. - COST CODE F5107 ITEM 4.1.3 MK-54 / VLA INSTALLATION: Funds provided for the installation of units procured in FY 2017. -COST CODE F5109 ITEM 6.1.1 HAAWC: Funding under this cost code provides for the option exercise of a Low-Rate Initial Production (LRIP) for the procurement of MK 54 High Altitude ASW Weapon Capability (HAAWC) Air Launched Accessory (ALA) kits, ALA Containers, All-Up Round Containers, engineering services, and ECPs.										

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LI 3215 - MK-54 Torpedo Mods

Navy

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2							P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
2.1.2) DIMINISHING MANUFACTURING SOURCES	-	-	-	-	-	-	-	-	1.800	-	-	1.400	-	-	-	-	-	1.400
2.1.3) MK-54 ENGINEERING SERVICES / ECPS FOR KITS	-	-	1.395	-	-	4.353	-	-	4.566	-	-	4.788	-	-	-	-	-	4.788
2.1.4) MK-54 MOD 1 INSTALLATION	-	-	-	-	-	-	-	-	-	-	-	1.908	-	-	-	-	-	1.908
Subtotal: Recurring Cost	-	-	21.795	-	-	25.353	-	-	22.356	-	-	24.486	-	-	-	-	-	24.486
Non Recurring Cost																		
2.2.1) MK-54 NRE	-	-	10.314	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	10.314	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5110 MK-54 MOD 1 HARDWARE Cost	-	-	32.109	-	-	25.353	-	-	22.356	-	-	24.486	-	-	-	-	-	24.486
Hardware - F5105 FLEET EXERCISE SYSTEMS Cost																		
Recurring Cost																		
3.1.1) FLEET EXERCISE SYSTEMS ^(t)	239,366.67	30	7.181	89,000.00	6	0.534	90,000.00	6	0.540	91,666.67	6	0.550	-	-	-	91,666.67	6	0.550
Subtotal: Recurring Cost	-	-	7.181	-	-	0.534	-	-	0.540	-	-	0.550	-	-	-	-	-	0.550
Subtotal: Hardware - F5105 FLEET EXERCISE SYSTEMS Cost	-	-	7.181	-	-	0.534	-	-	0.540	-	-	0.550	-	-	-	-	-	0.550
Hardware - F5107 MK-54/ VLA KITS Cost																		
Recurring Cost																		
4.1.1) MK-54 / VLA KITS ^(t)	123,813.33	150	18.572	48,968.75	32	1.567	49,750.00	40	1.990	-	-	-	-	-	-	-	-	-
4.1.2) MK-54 / VLA HARDWARE OBSOLESCENCE	-	-	0.844	-	-	0.249	-	-	0.250	-	-	-	-	-	-	-	-	-
4.1.3) MK-54 / VLA INSTALLATION ⁽²⁾	-	-	8.301	-	-	1.887	-	-	1.664	-	-	2.160	-	-	-	-	-	2.160
Subtotal: Recurring Cost	-	-	27.717	-	-	3.703	-	-	3.904	-	-	2.160	-	-	-	-	-	2.160
Subtotal: Hardware - F5107 MK-54/ VLA KITS Cost	-	-	27.717	-	-	3.703	-	-	3.904	-	-	2.160	-	-	-	-	-	2.160
Hardware - F5108 VLA COMPONENTS Cost																		
Recurring Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
5.1.1) VLA COMPONENT SETS	2,255K	22	49.606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.2) VLA ENGINEERING SVCS / ECPS	-	-	3.889	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.3) VLA CANISTERS	216,636.36	22	4.766	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1.4) VLA AUR BUILDUP / INSTALLATION	-	-	1.527	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	59.788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5108 VLA COMPONENTS Cost	-	-	59.788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5109 HAAWC Cost																		
Recurring Cost																		
6.1.1) HAAWC Kits ^(†)	-	-	-	-	-	-	-	-	-	60,859.00	30	1.826	-	-	-	60,859.00	30	1.826
6.1.2) HAAWC Engineering Services/ ECPs	-	-	-	-	-	-	-	-	-	-	-	2.343	-	-	-	-	-	2.343
6.1.3) HAAWC ALA Containers & Flight Test Simulator	-	-	-	-	-	-	-	-	-	-	-	0.080	-	-	-	-	-	0.080
6.1.4) HAAWC All Up Round Containers	-	-	-	-	-	-	-	-	-	-	-	0.390	-	-	-	-	-	0.390
6.1.5) DIMINISHING MANUFACTURING SOURCES	-	-	-	-	-	-	-	-	-	-	-	0.310	-	-	-	-	-	0.310
6.1.6) HAAWC IN-HOUSE PRODUCTION ENGINEERING SUPPORT	-	-	-	-	-	-	-	-	-	-	-	0.349	-	-	-	-	-	0.349
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	5.298	-	-	-	-	-	5.298
Subtotal: Hardware - F5109 HAAWC Cost	-	-	-	-	-	-	-	-	-	-	-	5.298	-	-	-	-	-	5.298
Hardware - F5CA1 CONGRESSIONAL ADDS- TECHNOLOGY INSERTIONS Cost																		
Non Recurring Cost																		
7.1.1) CONGRESSIONAL ADDS - TECHNOLOGY INSERTIONS	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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: Non Recurring Cost	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5CA1 CONGRESSIONAL ADDS- TECHNOLOGY INSERTIONS Cost	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5CA2 CONGRESSIONAL ADDS - TORPEDO TEST HARDWARE Cost																		
Non Recurring Cost																		
8.1.1) CONGRESSIONAL ADDS - TORPEDO TEST HARDWARE	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5CA2 CONGRESSIONAL ADDS - TORPEDO TEST HARDWARE Cost	-	-	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5CA3 CONGRESSIONAL ADD Cost																		
Non Recurring Cost																		
9.1.1) INTELLIGENT GRAPHICS TORPEDO TEST SET TROUBLESHOOTING MAINTENERS AID	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5CA3 CONGRESSIONAL ADD Cost	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware - F5CA4 CONGRESSIONAL ADDS Cost																		
Non Recurring Cost																		
10.1.1) LIGHTWEIGHT TORPEDO PSU TEST EQUIPMENT MODERNIZATION	-	-	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware - F5CA4 CONGRESSIONAL ADDS Cost	-	-	3.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - F5003 SUPPORT EQUIPMENT Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods						Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
11.1) SUPPORT EQUIPMENT	-	-	18.252	-	-	1.134	-	-	1.776	-	-	1.812	-	-	-	-	-	1.812
Subtotal: Support - F5003 SUPPORT EQUIPMENT Cost	-	-	18.252	-	-	1.134	-	-	1.776	-	-	1.812	-	-	-	-	-	1.812
Support - F5830 PRODUCTION ENGINEERING IN-HOUSE Cost																		
12.1) PRODUCTION ENGINEERING IN-HOUSE	-	-	83.222	-	-	6.908	-	-	6.937	-	-	7.430	-	-	-	-	-	7.430
Subtotal: Support - F5830 PRODUCTION ENGINEERING IN-HOUSE Cost	-	-	83.222	-	-	6.908	-	-	6.937	-	-	7.430	-	-	-	-	-	7.430
Support - F5840 QUALITY ASSURANCE Cost																		
13.1) QUALITY ASSURANCE	-	-	24.127	-	-	4.472	-	-	4.548	-	-	4.639	-	-	-	-	-	4.639
Subtotal: Support - F5840 QUALITY ASSURANCE Cost	-	-	24.127	-	-	4.472	-	-	4.548	-	-	4.639	-	-	-	-	-	4.639
Support - F5860 ACCEPT TEST & EVALUATION Cost																		
14.1) ACCEPT TEST & EVALUATION	-	-	54.452	-	-	3.740	-	-	3.815	-	-	3.891	-	-	-	-	-	3.891
Subtotal: Support - F5860 ACCEPT TEST & EVALUATION Cost	-	-	54.452	-	-	3.740	-	-	3.815	-	-	3.891	-	-	-	-	-	3.891
Support - F5900 PRODUCTION ENGINEERING CONTRACTOR Cost																		
15.1) PRODUCTION ENGINEERING CONTRACTOR	-	-	9.568	-	-	0.653	-	-	0.666	-	-	0.679	-	-	-	-	-	0.679
Subtotal: Support - F5900 PRODUCTION ENGINEERING CONTRACTOR Cost	-	-	9.568	-	-	0.653	-	-	0.666	-	-	0.679	-	-	-	-	-	0.679
Support - WAXXX ACQUISITION WORKFORCE FUNDING - 2009 Cost																		
16.1) ACQUISITION WORKFORCE FUNDING - 2009	-	-	0.287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - WAXXX ACQUISITION WORKFORCE FUNDING - 2009 Cost	-	-	0.287	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - F5103 FIELD SUPPORT OPERATIONS Cost																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods							Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
17.1) MK-46 MOD 5A (SW) SLEP KITS	-	-	1.561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - F5103 FIELD SUPPORT OPERATIONS Cost	-	-	1.561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - F5106 MK-54 PLATFORM INTEGRATION Cost																		
18.1) MK-54 PLATFORM INTEGRATION	-	-	0.697	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - F5106 MK-54 PLATFORM INTEGRATION Cost	-	-	0.697	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	1,353K	651	880.857	-	-	113.219	-	-	98.092	-	-	104.044	-	-	0.000	-	-	104.044

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

Footnotes:

- (1) Funds increase in FY 2018 for Non-Recurring Efforts to procure initial Proof of Manufacturing (POM Units) /First Article units for the new MK 54 Mod 0 Array competitive contract that is planned to award in FY 2018.
- (2) Funds provided for the installation of units procured in FY 2017.

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity:				P-1 Line Item Number / Title:					Item Number / Title [DODIC]:			
1507N / 03 / 2				3215 / MK-54 Torpedo Mods					1 / MK-54 Torpedo Mods			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) MK-54 KITS - MOD 0 ^(†)		2013	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	Various	NAVSEA	Aug 2013	Oct 2015	150	311,000.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2014	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	Various	NAVSEA	Aug 2014	Jun 2016	214	256,532.71	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2015	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MARYLAND	Various	NAVSEA	Jul 2015	Feb 2017	78	325,000.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2016	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	Various	NAVSEA	Jul 2016	Jul 2018	100	323,160.00	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2017	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	Various	NAVSEA	Jul 2017	Jul 2019	114	329,289.47	Y		
1.1.1) MK-54 KITS - MOD 0 ^(†)		2018	RAYTHEON/NORTHROP GRUMMAN / PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	Various	NAVSEA	Jul 2018	Jul 2020	114	338,342.00	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2014 ⁽³⁾	PROGENY/RAYTHEON - FY14 / MANASSAS VA/PORTSMOUTH, RI	Various	NAVSEA	Jul 2016	Dec 2017	40	510,000.00	Y		Jun 2014
2.1.1) MK-54 KITS - MOD 1 ^(†)		2016 ⁽⁴⁾	PROGENY / RAYTHEON - FY16 / MANASSAS VA /PORTSMOUTH, RI	Various	NAVSEA	Jul 2016	Oct 2018	40	525,000.00	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2017	PROGENY/RAYTHEON - FY17 / MANASSAS VA/PORTSMOUTH, RI	Various	NAVSEA	Aug 2017	Aug 2019	30	533,000.00	Y		
2.1.1) MK-54 KITS - MOD 1 ^(†)		2018	PROGENY/RAYTHEON- FY18 / MANASSAS VA/PORTSMOUTH, RI	Various	NAVSEA	Aug 2018	Jan 2020	30	546,333.33	Y		
3.1.1) FLEET EXERCISE SYSTEMS		2015	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Jan 2015	Jan 2016	6	88,000.00	Y		
3.1.1) FLEET EXERCISE SYSTEMS		2016	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Jan 2016	Jan 2017	6	89,000.00	Y		
3.1.1) FLEET EXERCISE SYSTEMS		2017	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Jan 2017	Jan 2018	6	90,000.00	Y		
3.1.1) FLEET EXERCISE SYSTEMS		2018	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KPT	Jan 2018	Jan 2019	6	91,666.67	Y		
4.1.1) MK-54 / VLA KITS		2016	LOCKHEED MARTIN / OWEGO NY	SS / FP	NAVSUP, WSS	Jul 2016	Nov 2017	32	48,968.75	Y		
4.1.1) MK-54 / VLA KITS		2017	LOCKHEED MARTIN / AKRON OH	SS / FFP	NAVSUP, WSS	Jul 2017	Nov 2018	40	49,750.00	Y		
6.1.1) HAAWC Kits		2018	BOEING INC / ST LOUIS, MO	SS / FFP	NAVSEA	Nov 2017	Nov 2018	30	60,859.00	Y		
(†) indicates the presence of a P-21												

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods	Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods
Footnotes: (3) Contract type C/FPIF/SS CPFF (4) Contract type C/FPIF/SS CPFF		

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods										Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods															
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2013										Fiscal Year 2014													B A L A N C E					
O C C O	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				
1.1.1) MK-54 KITS - MOD 0																																			
Prior Years Deliveries: 713																																			
	1	2013	NAVY	150	0	150											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150
	3	2014	NAVY	214	0	214																								A -	-	214			
	4	2015	NAVY	78	0	78																										78			
	2	2016	NAVY	100	0	100																										100			
	2	2017	NAVY	114	0	114																										114			
	2	2018	NAVY	114	0	114																										114			
2.1.1) MK-54 KITS - MOD 1																																			
	5	2014	NAVY	40	0	40																										40			
	6	2016	NAVY	40	0	40																										40			
	7	2017	NAVY	30	0	30																										30			
	8	2018	NAVY	30	0	30																										30			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017																	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods													Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods																	
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2015													Fiscal Year 2016													BALANCE							
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015													Calendar Year 2016																				
							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) MK-54 KITS - MOD 0																																								
Prior Years Deliveries: 713																																								
	1	2013	NAVY	150	0	150	-	-	-	-	-	-	-	-	-	-	-	-	27	39	40	40	4							0										
	3	2014	NAVY	214	0	214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	34	34	30	88									
	4	2015	NAVY	78	0	78														A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78					
	2	2016	NAVY	100	0	100																					A	-	-	-							-	-	-	100
	2	2017	NAVY	114	0	114																												-	-	-	114			
	2	2018	NAVY	114	0	114																												-	-	-	114			
2.1.1) MK-54 KITS - MOD 1																																								
	5	2014	NAVY	40	0	40																					A	-	-	-					40					
	6	2016	NAVY	40	0	40																					A	-	-	-					40					
	7	2017	NAVY	30	0	30																												-	-	-	30			
	8	2018	NAVY	30	0	30																												-	-	-	30			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP										

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods										Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods																															
Cost Elements (Units in Each)							Fiscal Year 2017										Fiscal Year 2018													BALANCE																					
OCCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT				Calendar Year 2017										Calendar Year 2018																															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP																				
1.1.1) MK-54 KITS - MOD 0																																																			
Prior Years Deliveries: 713																																																			
	1	2013	NAVY		150	150	0																											0																	
	3	2014	NAVY		214	126	88	30	30	28																								0																	
	4	2015	NAVY		78	0	78	-	-	-	-	20	20	20	18																			0																	
	2	2016	NAVY		100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	6	6	66																			
	2	2017	NAVY		114	0	114											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114																
	2	2018	NAVY		114	0	114																											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114
2.1.1) MK-54 KITS - MOD 1																																																			
	5	2014	NAVY		40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	0																		
	6	2016	NAVY		40	0	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40																		
	7	2017	NAVY		30	0	30											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30																
	8	2018	NAVY		30	0	30																											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP																				

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods										Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods														
Cost Elements (Units in Each)							Fiscal Year 2019										Fiscal Year 2020													B A L A N C E				
O C C O	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) MK-54 KITS - MOD 0																																		
Prior Years Deliveries: 713																																		
	1	2013	NAVY		150	150	0																										0	
	3	2014	NAVY		214	214	0																										0	
	4	2015	NAVY		78	78	0																										0	
	2	2016	NAVY		100	34	66	7	7	7	7	7	7	8	8	8																		0
	2	2017	NAVY		114	0	114	-	-	-	-	-	-	-	-	9	9	9	9	9	9	10	10	10	10	10	10						0	
	2	2018	NAVY		114	0	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	78			
2.1.1) MK-54 KITS - MOD 1																																		
	5	2014	NAVY		40	40	0																										0	
	6	2016	NAVY		40	0	40	4	4	4	4	4	4	4	4	4																		0
	7	2017	NAVY		30	0	30	-	-	-	-	-	-	-	-	-	6	6	6	6	6													0
	8	2018	NAVY		30	0	30	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	2	2	2	2	3	3	3	3	8			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods										Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2021										Fiscal Year 2022										BALANCE							
OCO	MFR#	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021										Calendar Year 2022																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP			
1.1.1) MK-54 KITS - MOD 0																																		
Prior Years Deliveries: 713																																		
	1	2013	NAVY		150	150	0																											0
	3	2014	NAVY		214	214	0																											0
	4	2015	NAVY		78	78	0																											0
	2	2016	NAVY		100	100	0																											0
	2	2017	NAVY		114	114	0																											0
	2	2018	NAVY		114	36	78	13	13	13	13	13	13																					0
2.1.1) MK-54 KITS - MOD 1																																		
	5	2014	NAVY		40	40	0																											0
	6	2016	NAVY		40	40	0																											0
	7	2017	NAVY		30	30	0																											0
	8	2018	NAVY		30	22	8	3	3	2																								0
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2					P-1 Line Item Number / Title: 3215 / MK-54 Torpedo Mods				Item Number / Title [DODIC]: 1 / MK-54 Torpedo Mods			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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/NORTHROP GRUMMAN - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	120	216	312	0	0	0	0	0	0	26	26
2	RAYTHEON/NORTHROP GRUMMAN - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS,MD	120	216	312	0	0	0	0	0	0	24	24
3	RAYTHEON/NORTHROP GRUMMAN - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MD	120	216	312	0	0	0	0	0	0	22	22
4	RAYTHEON/NORTHROP GRUMMAN - PORTSMOUTH, RHODE ISLAND/ANNAPOLIS, MARYLAND	120	216	312	0	0	0	0	0	0	19	19
5	PROGENY/RAYTHEON - FY14 - MANASSAS VA/ PORTSMOUTH, RI	TBD	TBD	TBD	0	0	17	17	0	0	17	17
6	PROGENY / RAYTHEON - FY16 - MANASSAS VA / PORTSMOUTH,RI	TBD	TBD	TBD	0	0	27	27	0	0	24	24
7	PROGENY/RAYTHEON - FY17 - MANASSAS VA/ PORTSMOUTH,RI	TBD	TBD	TBD	0	0	24	24	0	0	17	17
8	PROGENY/RAYTHEON- FY18 - MANASSAS VA/ PORTSMOUTH,RI	TBD	TBD	TBD	0	0	17	17	0	0	17	17
"A" in the Delivery Schedule indicates the Contract Award Date. Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy **Date:** May 2017

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	58	-	-	-	-	-	-	-	-	-	-	58
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,082.991	56.730	46.139	38.954	0.000	38.954	40.599	41.374	58.685	59.866	72.272	1,497.610
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,082.991	56.730	46.139	38.954	0.000	38.954	40.599	41.374	58.685	59.866	72.272	1,497.610
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,082.991	56.730	46.139	38.954	0.000	38.954	40.599	41.374	58.685	59.866	72.272	1,497.610

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

Initial Spares (<i>\$ in Millions</i>)	-	0.402	0.365	3.143	-	3.143	1.434	3.068	3.005	3.693	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	18,672K	-	-	-	-	-	-	-	-	-	-	25,821K

Description:

This line item procures MK 48 Mod 7 Common Broadband Advanced Sonar System (CBASS) kits for Heavyweight Torpedo upgrades.

The CBASS torpedo kit consists of three major components: Guidance & Control Box (GCB), a Broadband Sonar Analog Receiver (BSAR) and preamplifier. The GCB continued from Mods in production since FY 2002 and procurement of the BSAR began in FY 2004. The BSAR is a CBASS specific item, which consists of a preamplifier, receiver, and interfacing hardware that provides the capability to transmit and receive over a wide frequency band, taking advantage of broadband signal processing techniques. This provides for improvements in advanced threat countermeasures (CMs) capabilities.

[P5 / Hardware]: Funding under this cost code provides for the procurement of CBASS hardware kits from the contractor, engineering change proposals, and non-recurring engineering to resolve production issues including obsolescence. Engineering Services and Engineering Change Proposals (ECPs) pays for studies, plans, design changes, and implementation of design changes by the contractor primarily due to obsolescence that occurs during the contract performance. Also included in this cost code is the cost of government installation of kits procured in prior years. The installation includes required upgrades to convert the MK 48 Mod 6 Torpedo into a MK 48 Mod 7 Torpedo. The pre-amp, guidance control box, EMI filter, and Broadband Sonar Analog Receiver (BSAR) are installed at the government Intermediate Maintenance Activity. The torpedo goes through a final integration test and is loaded with the operational software and completes quality assurance checkout prior to issuing it as a warshot or exercise torpedo. Diminishing Manufacturing Sources (DMS) funds are provided to procure electronic parts which are declared obsolete by the original equipment manufacturing which is done to avoid the cost of an expensive redesign in the CBASS kit. The contractor will be required to procure and deliver the MK 48 Mod 7 DMS material for these obsolete components. Additionally, the contractor will be storing any lifetime buys at their facility, as they will eventually be required to build the DMS components into the kit assembly builds. Non-Recurring Engineering (NRE) funds the procurement of Proof of Manufacturing (POM) units for government testing, first article testing, tooling and test equipment, procurement of technical data package updates, and start-up costs for the production contract.

[P5 / D1003 - Support and Ancillary Equipment]: Funding under this cost code provides procurement and maintenance of support and test equipment at Naval Undersea Warfare Centers (NUWC) Keyport and the contractor facility for assembly, testing and integration.

[P5 / D1830 - Production Engineering (Contractor & In-House)]: Production Engineering (Contractor & In-House): Funding under this cost code provides for production tasks performed by NUWC NPT and KPT and includes review of contractor generated Engineering Change Proposals (ECPs), review and resolution of contractor failures and proposed corrective action, configuration management activities, contractor monitoring, risk analysis, technical problem resolution, software engineering, safety, integrated logistics support, environmental engineering, and information systems. Funding maintains production specification in accordance with production processes and provides subject matter experts to support root cause analysis of failed contractor hardware and monitor contractor defect reduction processes to ensure deficiencies are effectively addressed. Funding is also provided for program office acquisition support.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip		P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods
ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
[P5 / D1840 - Quality Assurance]: Funding under this cost code provides for quality assurance (QA) tasks performed by NUWC DIV KPT and NPT including: QA review of the contractor and subcontractor's data, review of the documentation indicating conformity to product performance requirements, and review of objective quality evidence. [P5 / D1860 - Acceptance T&E (Contractor & In-House)]: Funding under this cost code provides for Government production acceptance testing of contractor hardware. [P5 / D1CA1 - Congressional Add - Obsolescence]: Funding under this cost code provides for production engineering tasks associated with MK-48 hardware obsolescence. [P5 / D1CA2 - Congressional Add - Tech Insert]: Funding under this cost code provides for production engineering tasks associated with a technology refresh for the MK-48 sonar array and signal processor cards. [P5 / D1CA3 - Congressional Add - ASW Enhancements]: Funding under this cost code provides for production engineering tasks associated with a technology refresh for the MK-48 sonar array.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip						P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / MK-48 Torpedo ADCAP Mods	P-5a, P-21			58 / 1,082.991	- / 56.730	- / 46.139	- / 38.954	- / 0.000	- / 38.954
P-40	Total Gross/Weapon System Cost				58 / 1,082.991	- / 56.730	- / 46.139	- / 38.954	- / 0.000	- / 38.954
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										

Justification:

FY 2018 Program Changes:

1.1.2 CBASS Kits - Funding in FY 2018 decreased due to reduction in unit cost for CBASS Kits.

1.1.4 CBASS Installation: Funding in FY 2018 decreased due to a decrease in number of government installations of CBASS kits. The program will install procured kits delivered per the P-21 exhibit. In FY 2018, 44 kits are scheduled to be installed.

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods						Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				58		-		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				1,082.991		56.730		46.139		38.954		0.000		38.954				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				1,082.991		56.730		46.139		38.954		0.000		38.954				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				1,082.991		56.730		46.139		38.954		0.000		38.954				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		0.402		0.365		3.143		-		3.143				
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				18,672K		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 Cost																		
Recurring Cost																		
1.1.1) ADCAP Mod Kits	-	-	228.988	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) CBASS Kits ^(†)	280,330.55	838	234.917	241,517.00	81	19.563	241,881.00	73	17.657	204,587.00	79	16.162	-	-	-	204,587.00	79	16.162
1.1.3) CBASS Engineering Services/ ECPs	-	-	19.737	-	-	1.117	-	-	5.169	-	-	5.298	-	-	-	-	-	5.298
1.1.4) CBASS Installation ⁽¹⁾	-	-	25.627	-	-	6.413	-	-	8.721	-	-	2.464	-	-	-	-	-	2.464
1.1.5) Diminishing Manufacturing Sources ⁽²⁾	-	-	-	-	-	0.500	-	-	0.407	-	-	0.415	-	-	-	-	-	0.415
Subtotal: Recurring Cost	-	-	509.269	-	-	27.593	-	-	31.954	-	-	24.339	-	-	-	-	-	24.339
Non Recurring Cost																		
1.2.1) CBASS NRE	-	-	31.675	-	-	18.822	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	31.675	-	-	18.822	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	540.944	-	-	46.415	-	-	31.954	-	-	24.339	-	-	-	-	-	24.339
Support - D1003 - Support and Ancillary Equipment Cost																		
2.1) Support & Ancillary Equipment	-	-	50.061	-	-	1.560	-	-	1.587	-	-	1.619	-	-	-	-	-	1.619
Subtotal: Support - D1003 - Support and Ancillary Equipment Cost	-	-	50.061	-	-	1.560	-	-	1.587	-	-	1.619	-	-	-	-	-	1.619

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Exhibit P-5, Cost Analysis: FY 2018 Navy											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2						P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods						Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Support - D1830 - Production Engineering (Contractor & In-House) Cost																		
3.1) Production Engineering (Contractor & In-House)	-	-	274.027	-	-	4.586	-	-	7.050	-	-	7.337	-	-	-	-	-	7.337
Subtotal: Support - D1830 - Production Engineering (Contractor & In-House) Cost	-	-	274.027	-	-	4.586	-	-	7.050	-	-	7.337	-	-	-	-	-	7.337
Support - D1840 - Quality Assurance Cost																		
4.1) Quality Assurance (In-House)	-	-	18.089	-	-	2.086	-	-	2.776	-	-	2.832	-	-	-	-	-	2.832
Subtotal: Support - D1840 - Quality Assurance Cost	-	-	18.089	-	-	2.086	-	-	2.776	-	-	2.832	-	-	-	-	-	2.832
Support - D1860 - Acceptance T&E (Contractor & In-House) Cost																		
5.1) Acceptance T&E (Contractor & In-House)	-	-	180.770	-	-	2.083	-	-	2.772	-	-	2.827	-	-	-	-	-	2.827
Subtotal: Support - D1860 - Acceptance T&E (Contractor & In-House) Cost	-	-	180.770	-	-	2.083	-	-	2.772	-	-	2.827	-	-	-	-	-	2.827
Support - D1CA1 - Congressional Add - Obsolescence Cost																		
6.1) Congressional Add - Obsolescence	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - D1CA1 - Congressional Add - Obsolescence Cost	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - D1CA2 - Congressional Add - Tech Insert Cost																		
7.1) Congressional Add - Tech Insertion	-	-	2.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - D1CA2 - Congressional Add - Tech Insert Cost	-	-	2.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - D1CA3 - Congressional Add - ASW Enhancements Cost																		
8.1) Congressional Add - ASW Enhancements	-	-	6.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Support - D1CA3 - Congressional Add - ASW Enhancements Cost	-	-	6.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	18,672K	58	1,082.991	-	-	56.730	-	-	46.139	-	-	38.954	-	-	0.000	-	-	38.954
(†) indicates the presence of a P-5a																		

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2	P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods	Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
Footnotes: (1) CBASS installation cost in FY 2018 per installations of CBASS kits procured and delivered from prior years as shown in the P-21. (2) DMS: Funds provided to address obsolescence issues in the G&C section. The contractor will be required to procure and deliver the MK48 Mod 7 DMS Material for these obsolete components. Additionally, the contractor will be storing any lifetime buys at their facility, as they will eventually be required to build the DMSMS components into the G&C assembly builds.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2				P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods				Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) CBASS Kits ^(†)		2012	LOCKHEED MARTIN/ SIPPICAN / Marion, MA	C / FPIF	NAVSEA	Aug 2012	Oct 2015	58	237,103.45	Y		
1.1.2) CBASS Kits ^(†)		2013	LOCKHEED MARTIN/ SIPPICAN / Marion, MA	C / FPIF	NAVSEA	Aug 2013	Mar 2016	114	214,026.32	Y		
1.1.2) CBASS Kits ^(†)		2014	LOCKHEED MARTIN/SIPPICAN FY14 Option / Marion, MA	C / FPIF	NAVSEA	Aug 2014	Jan 2017	108	226,351.85	Y		
1.1.2) CBASS Kits ^(†)		2015	LOCKHEED MARTIN/SIPPICAN FY15 Option / Marion, MA	C / FFP	NAVSEA	Sep 2015	Oct 2017	44	290,496.00	Y		
1.1.2) CBASS Kits ^(†)		2016 ⁽³⁾	LOCKHEED MARTIN/ SIPPICAN FY16 ⁽⁴⁾ / Marion, MA	C / FFP	NAVSEA	May 2016	May 2019	81	241,517.00	Y		
1.1.2) CBASS Kits ^(†)		2017	LOCKHEED MARTIN/SIPPICAN FY17 Option ⁽⁵⁾ / Marion, MA	C / FFP	NAVSEA	May 2017	Jan 2020	73	241,881.00	Y		
1.1.2) CBASS Kits ^(†)		2018	LOCKHEED MARTIN/SIPPICAN FY18 Option ⁽⁶⁾ / Marion, MA	C / FFP	NAVSEA	May 2018	Jul 2020	79	204,587.00	Y		

^(†) indicates the presence of a P-21

Footnotes:

⁽³⁾ New competitive contract award in FY 2016. Longer lead time to delivery of Proof of Manufacturing (POM) units.

⁽⁴⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁵⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁶⁾ MSR and EOQ have not yet been determined by the contractor.

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2							P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods												Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods																	
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2012												Fiscal Year 2013												B A L A N C E					
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						
1.1.2) CBASS Kits																																				
Prior Years Deliveries: 514																																				
	1	2012	NAVY	58	0	58													A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58
	1	2013	NAVY	114	0	114																									A -	-	114			
	2	2014	NAVY	108	0	108																											108			
	3	2015	NAVY	44	0	44																											44			
	4	2016	NAVY	81	0	81																											81			
	5	2017	NAVY	73	0	73																											73			
	6	2018	NAVY	79	0	79																											79			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017										
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods													Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2014													Fiscal Year 2015													BALANCE
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014													Calendar Year 2015													
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1.1.2) CBASS Kits																																	
Prior Years Deliveries: 514																																	
	1	2012	NAVY	58	0	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58		
	1	2013	NAVY	114	0	114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	114		
	2	2014	NAVY	108	0	108											A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108
	3	2015	NAVY	44	0	44																									A -	44	
	4	2016	NAVY	81	0	81																											81
	5	2017	NAVY	73	0	73																											73
	6	2018	NAVY	79	0	79																											79
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods										Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods																					
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2016										Fiscal Year 2017													BALANCE											
O C 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										
1.1.2) CBASS Kits																																									
Prior Years Deliveries: 514																																									
	1	2012	NAVY	58	0	58	12	16	16	14																							0								
	1	2013	NAVY	114	0	114	-	-	-	-	-	8	9	9	9	9	9	15	15	22													0								
	2	2014	NAVY	108	0	108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	20	20	20	20	20								0							
	3	2015	NAVY	44	0	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			44								
	4	2016	NAVY	81	0	81							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			81							
	5	2017	NAVY	73	0	73																										A	-	-	-	-	-	-			73
	6	2018	NAVY	79	0	79																													79						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P											

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods										Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019													BALANCE				
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019																	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP			
1.1.2) CBASS Kits																																		
Prior Years Deliveries: 514																																		
	1	2012	NAVY	58	58	0																												0
	1	2013	NAVY	114	114	0																												0
	2	2014	NAVY	108	108	0																												0
	3	2015	NAVY	44	0	44																												17
	4	2016	NAVY	81	0	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	31				
	5	2017	NAVY	73	0	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	73				
	6	2018	NAVY	79	0	79											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79	
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP				

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017																
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2										P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods										Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods																
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020										Fiscal Year 2021										BALANCE									
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021																			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY		JUN	JUL	AUG	SEP					
1.1.2) CBASS Kits																																				
Prior Years Deliveries: 514																																				
	1	2012	NAVY		58	58	0																										0			
	1	2013	NAVY		114	114	0																										0			
	2	2014	NAVY		108	108	0																										0			
	3	2015	NAVY		44	44	0																										0			
	4	2016	NAVY		81	50	31																										10	10	11	0
	5	2017	NAVY		73	0	73																										-	-	-	10
	6	2018	NAVY		79	0	79	-	-	-	-	-	-	-	5	14	14	14	14	14	4						0									
								OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy								Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 2					P-1 Line Item Number / Title: 3225 / MK-48 Torpedo ADCAP Mods				Item Number / Title [DODIC]: 1 / MK-48 Torpedo ADCAP Mods		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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/ SIPPICAN - Marion, MA	89	148	240	0	3	25	28	0	3	23	26
2	LOCKHEED MARTIN/ SIPPICAN FY14 Option - Marion, MA	89	148	240	0	0	0	0	0	0	20	20
3	LOCKHEED MARTIN/ SIPPICAN FY15 Option - Marion, MA	89	148	240	0	0	0	0	0	0	25	25
4	LOCKHEED MARTIN/ SIPPICAN FY16 ⁽⁴⁾ - Marion, MA	TBD	TBD	90	0	0	36	36	0	0	0	0
5	LOCKHEED MARTIN/ SIPPICAN FY17 Option ⁽⁵⁾ - Marion, MA	TBD	TBD	90	0	0	32	32	0	0	0	0
6	LOCKHEED MARTIN/ SIPPICAN FY18 Option ⁽⁶⁾ - Marion, MA	TBD	TBD	90	0	0	26	26	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

⁽⁴⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁵⁾ MSR and EOQ have not yet been determined by the contractor.

⁽⁶⁾ MSR and EOQ have not yet been determined by the contractor.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 2: Mod of Torpedoes and Related Equip							P-1 Line Item Number / Title: 3231 / Quickstrike Mine					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	50.893	10.754	1.236	10.337	0.000	10.337	7.367	5.289	5.406	5.515	-	96.797
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	50.893	10.754	1.236	10.337	0.000	10.337	7.367	5.289	5.406	5.515	-	96.797
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	50.893	10.754	1.236	10.337	0.000	10.337	7.367	5.289	5.406	5.515	-	96.797
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The program provides Naval mines for use as anti-ship or anti-submarine subsurface weapons. The Naval mining capability consists of the QUICKSTRIKE (QS) mine, the Submarine Launched Mobile Mine (SLMM), and the modified Clandestine Delivered Mine (CDM). The Quickstrike is a family of shallow water, aircraft laid mines used primarily against surface and subsurface craft. The QUICKSTRIKE family of delivered mines has 3 variants based on size - the MK 62, MK 63, and MK 65. The MK 62 and MK 63 (500 lb. and 1000 lb.) QS are created by adding mine hardware to the MK 82 and MK 83 general purpose bomb (respectively) to form a mine. The MK 65 (2000 lb.) QS consists entirely of hardware designed for use as a mine. The Mod 0, 1, and 3 variants utilize various Target Detection Devices (TDD). The QS Mod 3 utilizes a newly developed TDD MK 71, a software-programmable device capable of being programmed to optimize detection of new threats. For the QUICKSTRIKE MK 62 and 63, the QS Mod 3 Kit consists of the TDD (including the service and dummy MK 71), Safe/Arming (S&A) devices (including the service MK 75, practice MK 81, and dummy MK 84), battery (MK 176), TDD Adapter Ring MK 163, and miscellaneous hardware. For the QUICKSTRIKE MK 65, the Mod 3 Kit consists of the TDD (including the service and dummy MK 71), the existing S&A devices (including the service MK 45 and practice and dummy S&A devices), the existing batteries MK 131 or 132, TDD Adapter MK 157, and miscellaneous hardware. Additional support hardware for the QS MK 62/63/65 Mod 3 includes Test Set MK 650 and Programmer MK 11. The MK 67 SLMM is the only submarine launched variant. The CDM uses existing SLMM components to provide a mine with potential to be delivered by unmanned maritime platforms.												
Justification: FY 2018 provides funding for the baseline program supporting mining capabilities for the US Navy which are deployed by multiple aircraft vehicles or are submarine launched. FY 2018 increase in funding also provides for procurement of all necessary hardware and support equipment for the Quickstrike Mod 3 series of weapons including the TDD MK 71 and Safe and Arming (S&A) MK 75 for the Quickstrike MK 62 and MK 63 variants to support warfighter requirements.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	401.825	62.771	60.061	70.383	0.000	70.383	71.358	72.301	71.670	73.117	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	401.825	62.771	60.061	70.383	0.000	70.383	71.358	72.301	71.670	73.117	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	401.825	62.771	60.061	70.383	0.000	70.383	71.358	72.301	71.670	73.117	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	0.894	0.489	1.147	-	1.147	0.001	0.003	-	-	-	2.534
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Torpedo Support Equipment account procures various 4T and associated torpedo components required to ready weapons for Surface Ships, Submarines, Fixed Wing, and Rotary Wing to achieve and maintain a readiness posture sufficient to provide Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASUW) readiness. The objective of this line is to provide the fleet with exercise weapons for conducting training maneuvers which involve firing the torpedoes and to maintain warshot inventories in an operational ready-for-issue (RFI) status in support of combat ready deployment by ASW forces. After a torpedo is fired during a training exercise, it is recovered and all expendable components such as batteries, cables, igniters (as well as various accessories required for air-launched torpedoes), must be replaced. These items as well as components such as exercise heads, fuel tanks, and exhaust valves which may be used more than one time, but which are worn out or lost in service, are procured each fiscal year in quantities dependent upon the fleet training requirements and tempo of operations. The torpedoes requiring support are the MK-46 Mod 5A(SW); MK-48 Mods 6 (legacy and ACOT) and 7; and MK-54.												
[P5 / F8001 - LWT SUPPORT EQUIPMENT]: LIGHTWEIGHT (LWT) Support Equipment procures 4T components to support: (1) Exercise torpedo builds for Fleet Proficiency Surface Command Course and Tactical Development firings; (2) Warshot torpedo maintenance to sustain the fleet with an inventory of RFI warshot torpedoes as they come due for maintenance; (3) Assembly of new production MK-54 Warshots (4) Vertical Launch Anti-Submarine Rocket (ASROC) (VLA) Warshot and Exercise missile assemblies; and (5) Various air launch frame assemblies to support Fleet loadout. LWT 4T Components include the following: seawater batteries, pressure cylinders, thermal batteries, fuel shutoff valves, gas generator assemblies, igniters, containers, lanyard start assemblies, electrical initiators, suspension bands, VLA assembly kits, and propeller baffles.												
[P5 / F8002 LIGHTWEIGHT OTHER EQUIPMENT INVESTMENT]: Procures, installs, and supports Engineering Change Proposal/Ordnance Alteration (ECP/ORDALT) material required for support and test equipment and to retrofit torpedoes and 4T components to the latest RFI configuration.												
[P5 / F8830 LIGHTWEIGHT PRODUCTION ENGINEERING - IN HOUSE]: Provides for production support services at Naval Undersea Warfare Center (NUWC) Divisions Keyport/Newport (KPT/NPT) including program planning, funds management, budgeting, data management, acquisition engineering, software management, Integrated Logistics Support (ILS) and Government-Furnished Equipment (GFE) management, training equipment and configuration management.												
[P5 / F8840 - LIGHTWEIGHT QUALITY ASSURANCE]: Provides material costs associated with failure analysis and site investigations for torpedo system component failures, product quality assurance (QA), and critical unique firing tests.												
[P5 / F8860 - LIGHTWEIGHT ACCEPTANCE TEST AND EVALUATION]: Provides support for acceptance testing of LWT 4T components.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment		P-1 Line Item Number / Title: 3301 / Torpedo 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		
[P5 / F8900 - LIGHTWEIGHT PRODUCTION ENGINEERING - CONTRACTOR]: Provides for production support services including program planning, funds management, budgeting, and data management. [P5 - 2 / F8003 LIGHTWEIGHT RECOVERABLE EXERCISE TORPEDO (REXTORP)]: Provides for the procurement of MK-54 REXTORPs. REXTORPs provide a reusable exercise inert torpedo shape for fixed wing, rotary, and surface launched platforms in support of Fleet ASW training and readiness. [P5 - 3 / F8100 - HEAVYWEIGHT EXERCISE AND EXPENDABLES AND COMPONENT REPLACEMENT]: Procures 4T components to support: (1) exercise torpedo builds for fleet proficiency in the submarine and surface command course and tactical development firings; (2) warshot torpedo maintenance to sustain the fleet with an inventory of RFI warshot torpedoes as they come due for maintenance; and (3) assembly of modernized MK-48 Mod 7 components back to an All-Up-Round (AUR) configuration, either exercise or warshot. HWT 4T components include the following: wire coils, flex hoses, Otto Fuel, igniters, propellant, A-cables, A-cable inserts, A-cable receptacles, cylinder barrels, exercise fuel tanks, containers, and chamber and valves. [P5 - 3 / F8101 - HEAVYWEIGHT OTHER EQUIPMENT INVESTMENT]: Procures, installs, and supports ECP/ORDALT material required for support and test equipment and to retrofit torpedoes and 4T components to the latest RFI configuration. [P5 - 3 / F8843 - HEAVYWEIGHT QUALITY ASSURANCE]: Provides material costs associated with failure analysis and site investigations for torpedo system component failures and product QA and critical unique firing tests. [P5 - 3 / F8833 - HEAVYWEIGHT PRODUCTION ENGINEERING - IN HOUSE]: Provides for production support services at NUWC Divisions KPT/NPT including program planning, funds management, budgeting, data management, acquisition engineering, software management, ILS, and GFE management, training equipment, and configuration management. [P5 - 3 / F8863 - HEAVY WEIGHT ACCEPTANCE TEST AND EVALUATION]: Provides support for acceptance testing of HWT 4T components. [P5 - 3 / F8893 - HEAVYWEIGHT PRODUCTION ENGINEERING - CONTRACTOR]: Provides for production support services including program planning, funds management, budgeting, and data management.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Lightweight Torpedo Support Equipment	P-5a, P-21			- / 94.364	- / 18.531	- / 25.350	- / 27.126	- / 0.000	- / 27.126
P-5	2 / Recoverable Exercise Torpedo	P-5a			- / 12.706	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-5	3 / Heavyweight Torpedo Support Equipment	P-5a			- / 294.755	- / 44.240	- / 34.711	- / 43.257	- / 0.000	- / 43.257
P-40	Total Gross/Weapon System Cost				- / 401.825	- / 62.771	- / 60.061	- / 70.383	- / 0.000	- / 70.383
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: FY 2018 Program Changes: F8002: Increase to support commencement of MK 54 Warshot Maintenance F8100: Increase due to transitioning from short to long torpedo wire coils and minor 4T procurement adjustments. F8101: Increase to commence installation of 4 replacement MK 710 Automated Test Sets (\$3.6M) and one-time procurement of WES Expansion Boxes (\$2.4M). F8863: Increase to complete 1st article sample of OTTO Fuel from new Agile Chemical Facility. Unit costs within the Torpedo Support Equipment (TSE) program increase above inflation factors because the costs are based on raw material cost indices for materials such as copper, aluminum, steel, etc.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				94.364		18.531		25.350		27.126		0.000		27.126				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				94.364		18.531		25.350		27.126		0.000		27.126				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				94.364		18.531		25.350		27.126		0.000		27.126				
(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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - F8001 - LWT SUPPORT EQUIPMENT Cost																		
Recurring Cost																		
1.1.1) F8001 MK46 Maintenance Kits	329.82	285	0.094	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)(†)	148.72	975	0.145	115.13	400	0.046	100.44	400	0.040	105.46	450	0.047	-	-	0.000	105.46	450	0.047
1.1.3) F8001 MK54 Maintenance Kits (BWLW)(†)	490.00	100	0.049	571.43	35	0.020	477.91	35	0.017	453.81	300	0.136	-	-	0.000	453.81	300	0.136
1.1.4) F8001 MK54 Pinger Kits (BWLX)(†)	46.91	810	0.038	37.50	320	0.012	48.23	300	0.014	50.64	300	0.015	-	-	0.000	50.64	300	0.015
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)(†)	1,925.55	1,585	3.052	1,703.64	550	0.937	1,594.23	300	0.478	1,673.94	300	0.502	-	-	0.000	1,673.94	300	0.502
1.1.6) F8001 Propeller Baffles (CWRJ)(†)	303.30	1,487	0.451	290.00	300	0.087	301.33	200	0.060	316.39	200	0.063	-	-	0.000	316.39	200	0.063
1.1.7) F8001 Thermal Battery (5W15)(†)	3,694.36	1,047	3.868	-	-	0.000	1,488.38	543	0.808	1,562.80	362	0.566	-	-	0.000	1,562.80	362	0.566
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)(†)	178.00	1,000	0.178	196.67	300	0.059	195.18	325	0.063	189.63	250	0.047	-	-	0.000	189.63	250	0.047

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3							P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ) ^(†)	208.89	450	0.094	226.67	150	0.034	204.85	200	0.041	211.68	150	0.032	-	-	0.000	211.68	150	0.032
1.1.10) F8001 MK54 Igniter (TH04) ^(†)	775.88	1,700	1.319	-	-	0.000	754.21	400	0.302	791.92	350	0.277	-	-	0.000	791.92	350	0.277
1.1.11) F8001 MK54 BSS Bags ^(†)	24,125.00	16	0.386	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.12) F8001 Electric Initiator	1,840.00	200	0.368	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.13) F8001 Generator Assembly, Gas	15,535.71	392	6.090	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41) ^(†)	828.57	875	0.725	746.67	300	0.224	719.94	180	0.130	755.94	240	0.181	-	-	0.000	755.94	240	0.181
1.1.15) F8001 Pressure Cylinder, Warshot (YW09) ^(†)	1,013.24	1,284	1.301	-	-	0.000	976.67	175	0.171	1,025.51	150	0.154	-	-	0.000	1,025.51	150	0.154
1.1.16) F8001 Pressure Cylinder, Exercise (TW58) ^(†)	1,157.27	763	0.883	1,125.00	200	0.225	1,079.17	100	0.108	-	-	0.000	-	-	0.000	-	-	0.000
1.1.17) F8001 MK46 Seawater Batteries	1,162.50	400	0.465	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.18) F8001 MK31 Stabilizer (QW47) ^(†)	2,328.33	600	1.397	-	-	0.000	1,775.03	450	0.799	1,863.78	300	0.559	-	-	0.000	1,863.78	300	0.559
1.1.19) F8001 VLA Reassembly Kits ^(†)	3,783.92	199	0.753	1,555.56	45	0.070	2,684.60	30	0.081	2,818.83	30	0.085	-	-	0.000	2,818.83	30	0.085
1.1.20) F8001 VLA Thermal Battery (CWEC) ^(†)	1,546.67	150	0.232	1,700.00	60	0.102	-	-	0.000	1,877.17	25	0.047	-	-	0.000	1,877.17	25	0.047
1.1.21) F8001 VLA Separator Nut Initiator (MT99) ^(†)	1,173.91	690	0.810	1,386.67	150	0.208	926.10	40	0.037	-	-	0.000	-	-	0.000	-	-	0.000
1.1.22) F8001 MK792/0 Universal AUR Container	-	-	1.781	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.23) F8001 Universal REXTORP Containers	46,757.14	70	3.273	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.24) F8001 Sonobuoys ^(†)	2,208.33	240	0.530	2,354.17	48	0.113	2,594.77	48	0.125	2,666.42	48	0.128	-	-	0.000	2,666.42	48	0.128
1.1.25) F8001 SWT Target Procurement	-	-	0.258	-	-	0.073	-	-	0.072	-	-	0.075	-	-	0.000	-	-	0.075
1.1.26) F8001 VLA Telemetry Kits ^(†)	109,916.67	12	1.319	93,750.00	4	0.375	96,512.50	4	0.386	99,407.75	4	0.398	-	-	0.000	99,407.75	4	0.398
1.1.27) F8001 Suspension Bands (T107) ^(†)	-	-	0.000	2,602.86	350	0.911	2,312.94	300	0.694	2,428.58	400	0.971	-	-	0.000	2,428.58	400	0.971
1.1.28) F8001 Otto Fuel Reclamation	-	-	2.705	-	-	0.791	-	-	0.427	-	-	0.435	-	-	0.000	-	-	0.435
1.1.29) F8001 VLA Refurbishment Kits ^(†)	-	-	7.300	690,909.09	11	7.600	621,727.27	22	13.678	640,425.91	22	14.089	-	-	0.000	640,425.91	22	14.089
1.1.30) F8001 ECP/ORDALT	-	-	0.023	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.31) F8001 4T Procurement Support	-	-	0.059	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.32) F8001 MK 28 Stabilizer (TA68) ^(†)	-	-	0.000	-	-	0.000	2,003.24	600	1.202	4,667.99	400	1.867	-	-	0.000	4,667.99	400	1.867
Subtotal: Recurring Cost	-	-	39.946	-	-	11.887	-	-	19.733	-	-	20.674	-	-	0.000	-	-	20.674
Subtotal: Hardware - F8001 - LWT SUPPORT EQUIPMENT Cost	-	-	39.946	-	-	11.887	-	-	19.733	-	-	20.674	-	-	0.000	-	-	20.674
Hardware - F8002 LIGHTWEIGHT OTHER EQUIPMENT INVESTMENT Cost																		
Recurring Cost																		
2.1.1) F8002 Lightweight Other Equipment Investment	-	-	23.952	-	-	3.584	-	-	1.485	-	-	2.034	-	-	0.000	-	-	2.034
Subtotal: Recurring Cost	-	-	23.952	-	-	3.584	-	-	1.485	-	-	2.034	-	-	0.000	-	-	2.034
Subtotal: Hardware - F8002 LIGHTWEIGHT OTHER EQUIPMENT INVESTMENT Cost	-	-	23.952	-	-	3.584	-	-	1.485	-	-	2.034	-	-	0.000	-	-	2.034
Support - F8830 LIGHTWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost																		
3.1) F8830 Lightweight Production Engineering (In House)	-	-	23.109	-	-	2.490	-	-	3.572	-	-	3.853	-	-	0.000	-	-	3.853
Subtotal: Support - F8830 LIGHTWEIGHT	-	-	23.109	-	-	2.490	-	-	3.572	-	-	3.853	-	-	0.000	-	-	3.853

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Exhibit P-5, Cost Analysis: FY 2018 Navy											Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
PRODUCTION ENGINEERING - IN HOUSE Cost																		
Support - F8840 - LIGHTWEIGHT QUALITY ASSURANCE Cost																		
4.1) F8840 Lightweight Quality Assurance	-	-	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - F8840 - LIGHTWEIGHT QUALITY ASSURANCE Cost	-	-	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - F8860 - LIGHTWEIGHT ACCEPTANCE TEST AND EVALUATION Cost																		
5.1) F8860 Lightweight Acceptance Test and Evaluation	-	-	4.777	-	-	0.270	-	-	0.260	-	-	0.265	-	-	0.000	-	-	0.265
Subtotal: Support - F8860 - LIGHTWEIGHT ACCEPTANCE TEST AND EVALUATION Cost	-	-	4.777	-	-	0.270	-	-	0.260	-	-	0.265	-	-	0.000	-	-	0.265
Support - F8900 - LIGHTWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost																		
6.1) F8900 Lightweight Production Engineering - Contractor	-	-	2.283	-	-	0.300	-	-	0.300	-	-	0.300	-	-	0.000	-	-	0.300
Subtotal: Support - F8900 - LIGHTWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost	-	-	2.283	-	-	0.300	-	-	0.300	-	-	0.300	-	-	0.000	-	-	0.300
Gross/Weapon System Cost	-	-	94.364	-	-	18.531	-	-	25.350	-	-	27.126	-	-	0.000	-	-	27.126
(†) indicates the presence of a P-5a																		

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2015	Wair Products / Minneapolis, MN	C / FFP	NAVSUP, GLS	Nov 2015	Apr 2016	350	102.86	Y		May 2015
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2016	Wair Products / Minneapolis, MN	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	400	115.13	Y		
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2017	TBD / NAVSUP, GLS	C / FFP	NAVSUP, GLS	May 2017	Oct 2017	400	100.44	Y		
1.1.2) F8001 MK 54 Turnaround Kits (CWQB)		2018	TBD / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	450	105.46	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2015	Wair Products / Minneapolis, MN	C / FFP	NAVSUP, GLS	Nov 2015	Apr 2016	35	542.86	Y		May 2015
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2016	Wair Products / Minneapolis, MN	C / FFP	NAVSUP, GLS	May 2016	Nov 2016	35	571.43	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2017	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	May 2017	Oct 2017	35	477.91	Y		
1.1.3) F8001 MK54 Maintenance Kits (BWLW)		2018	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	300	453.81	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2015	Wair Products / Minneapolis, MN	C / FFP	NAVSUP, GLS	Nov 2015	May 2016	320	35.18	Y		May 2015
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2016	Wair Products / Minneapolis, MN	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	320	37.50	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	May 2017	Oct 2017	300	48.23	Y		
1.1.4) F8001 MK54 Pinger Kits (BWLX)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Aug 2018	300	50.64	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2015	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Feb 2015	Aug 2015	450	1,622.22	Y		Apr 2014
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2016	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Nov 2015	May 2016	550	1,703.64	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2017	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Mar 2017	Sep 2017	300	1,594.23	Y		
1.1.5) F8001 MK54 Lanyard Start Assembly (BWJA)		2018	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	300	1,673.94	Y		
1.1.6) F8001 Propeller Baffles (CWRJ)		2015	PRN ASSOCIATES / INDIANAPOLIS, IN	C / FFP	NAVSUP, GLS	Jun 2015	Dec 2015	200	275.00	Y		Apr 2015
1.1.6) F8001 Propeller Baffles (CWRJ)		2016	PRN ASSOCIATES / INDIANAPOLIS, IN	C / FFP	NAVSUP, GLS	Jul 2016	Jan 2017	300	290.00	Y		Nov 2015
1.1.6) F8001 Propeller Baffles (CWRJ)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jul 2017	Jan 2018	200	301.33	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3				P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.6) F8001 Propeller Baffles (CWRJ)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jul 2018	Jan 2019	200	316.39	Y		
1.1.7) F8001 Thermal Battery (5W15)		2015	ADVANCED THERMAL BATTERIES / NAVSUP, LOC	C / FFP	NAVSUP, GLS	Nov 2015	May 2016	235	1,561.70	Y		Apr 2015
1.1.7) F8001 Thermal Battery (5W15)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jun 2017	Nov 2017	543	1,488.38	Y		
1.1.7) F8001 Thermal Battery (5W15)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Aug 2018	362	1,562.80	Y		
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2015	EUR-PAC CORP / WATERBURY, CT	C / FFP	NAVSUP, GLS	Mar 2015	Sep 2015	300	186.67	Y		Oct 2014
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2016	EUR-PAC CORP / WATERBURY, CT	C / FFP	NAVSUP, GLS	May 2016	Nov 2016	300	196.67	Y		Nov 2015
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2017	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	May 2017	Oct 2017	325	195.18	Y		
1.1.8) F8001 Battery, TDS (MK 54) (CWRP)		2018	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	Mar 2018	Aug 2018	250	189.63	Y		
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2015	EUR-PAC CORP / WATERBURY, CT	C / FFP	NAVSUP, GLS	Mar 2015	Sep 2015	150	220.00	Y		Oct 2014
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2016	EUR-PAC CORP - FY-16 / WATERBURY, CT	C / FFP	NAVSUP, GLS	May 2016	Dec 2016	150	226.67	Y		Dec 2015
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	May 2017	Oct 2017	200	204.85	Y		
1.1.9) F8001 Battery, Scuttle (MK54) (CWRQ)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	150	211.68	Y		
1.1.10) F8001 MK54 Igniter (TH04)		2015	PACIFIC SCIENTIFIC ENERGETIC MATERIALS / HOLLISTER, CA	C / FFP	NAVSUP, GLS	Sep 2015	Mar 2016	400	552.50	Y		Jan 2015
1.1.10) F8001 MK54 Igniter (TH04)		2017	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	400	754.21	Y		
1.1.10) F8001 MK54 Igniter (TH04)		2018	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	350	791.92	Y		
1.1.11) F8001 MK54 BSS Bags		2015	NUWC KEYPORT / KEYPORT WASHINGTON	C / FFP	NUWC, KEYPORT	Mar 2015	Jan 2016	6	27,666.67	Y		
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2015	GENERAL DYNAMICS FY15 / VIRGINIA	C / FFP	NAVSUP, GLS	Aug 2015	Mar 2016	325	711.42	Y		Apr 2015
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2016	GENERAL DYNAMICS FY16 / VIRGINIA	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	300	746.67	Y		Oct 2015
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	180	719.94	Y		
1.1.14) F8001 Valve Assembly , Fuel Shutoff (3W41)		2018	UNKNOWN / NAVSUP, GLS	C / TBD	NAVSUP, GLS	Mar 2018	Aug 2018	240	755.94	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3				P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.15) F8001 Pressure Cylinder, Warshot (YW09)		2015	Cartridge Actuated Devices/ NAVSUP, GLS / Fairfield, NJ	C / FFP	NAVSUP, GLS	Nov 2015	May 2016	350	937.75	Y		
1.1.15) F8001 Pressure Cylinder, Warshot (YW09)		2017	Cartridge Actuated Devices/ NAVSUP, GLS / Fairfield, NJ	C / FFP	NAVSUP, GLS	Nov 2016	May 2017	175	976.67	Y		
1.1.15) F8001 Pressure Cylinder, Warshot (YW09)		2018	Cartridge Actuated Devices/ NAVSUP, GLS / Fairfield, NJ	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	150	1,025.51	Y		
1.1.16) F8001 Pressure Cylinder, Exercise (TW58)		2015	Cartridge Actuated Devices FY15 / Fairfield, NJ	C / FFP	NAVSUP, GLS	Nov 2015	Jun 2016	200	1,075.00	Y		
1.1.16) F8001 Pressure Cylinder, Exercise (TW58)		2016	Cartridge Actuated Devices FY16 / Fairfield, NJ	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	200	1,125.00	Y		
1.1.16) F8001 Pressure Cylinder, Exercise (TW58)		2017	Cartridge Actuated Devices FY15 / Fairfield, NJ	C / FFP	NAVSUP, GLS	Nov 2016	Jun 2017	100	1,079.17	Y		
1.1.18) F8001 MK31 Stabilizer (QW47)		2015	UNITED TEREX INC, NOR PA / FAIRVIEW VILLAGE, PA/NUWC, KEYPORT	C / FFP	NAVSUP, GLS	Jul 2015	Jan 2016	200	1,940.00	Y		Jan 2015
1.1.18) F8001 MK31 Stabilizer (QW47)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	450	1,775.03	Y		
1.1.18) F8001 MK31 Stabilizer (QW47)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Aug 2018	300	1,863.78	Y		
1.1.19) F8001 VLA Reassembly Kits		2015	Sunbelt Design & Developement / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Apr 2015	Oct 2015	45	1,488.89	Y		Jan 2015
1.1.19) F8001 VLA Reassembly Kits		2016	Sunbelt Design & Developement FY16 / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	45	1,555.56	Y		
1.1.19) F8001 VLA Reassembly Kits		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jun 2017	Nov 2017	30	2,684.60	Y		
1.1.19) F8001 VLA Reassembly Kits		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Aug 2018	30	2,818.83	Y		
1.1.20) F8001 VLA Thermal Battery (CWEC)		2015	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Jul 2015	Jan 2016	50	1,621.58	Y		Jan 2015
1.1.20) F8001 VLA Thermal Battery (CWEC)		2016	EAGLEPICHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Nov 2015	Nov 2016	60	1,700.00	Y		
1.1.20) F8001 VLA Thermal Battery (CWEC)		2018	EAGLEPICHER TECH / JOPLIN, MO	C / TBD	NAVSUP, GLS	Mar 2018	Sep 2018	25	1,877.17	Y		
1.1.21) F8001 VLA Separator Nut Initiator (MT99)		2015	Pacific Scientific / Chandler, AZ	C / FFP	NAVSUP, GLS	Sep 2015	Mar 2016	150	1,321.90	Y		Jan 2015
1.1.21) F8001 VLA Separator Nut Initiator (MT99)		2016	Pacific Scientific / Chandler, AZ	C / FFP	NAVSUP, GLS	Jan 2016	Jul 2016	150	1,386.67	Y		
1.1.21) F8001 VLA Separator Nut Initiator (MT99)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jun 2017	Nov 2017	40	926.10	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3				P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.24) F8001 Sonobuoys		2015	UNDERSEA SENSOR SYSTEMS INC / COLUMBIA CITY, IN	C / FFP	NUWC, KEYPORT	Jun 2015	Dec 2015	48	2,251.00	Y		Nov 2014
1.1.24) F8001 Sonobuoys		2016	UNDERSEA SENSOR SYSTEMS INC / COLUMBIA CITY, IN	C / FFP	NUWC, KEYPORT	Jan 2016	Jul 2016	48	2,354.17	Y		
1.1.24) F8001 Sonobuoys		2017	UNDERSEA SENSOR SYSTEMS INC / COLUMBIA CITY, IN	C / FFP	NUWC, KEYPORT	Jan 2017	Jul 2017	48	2,594.77	Y		
1.1.24) F8001 Sonobuoys		2018	UNDERSEA SENSOR SYSTEMS INC / COLUMBIA CITY, IN	C / TBD	NUWC, KEYPORT	Mar 2018	Sep 2018	48	2,666.42	Y		
1.1.26) F8001 VLA Telemetry Kits		2015	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Jun 2015	Dec 2015	2	91,000.00	Y		Dec 2014
1.1.26) F8001 VLA Telemetry Kits		2016	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Jan 2016	Jul 2016	4	93,750.00	Y		Jan 2016
1.1.26) F8001 VLA Telemetry Kits		2017	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Jan 2017	Jul 2017	4	96,512.50	Y		
1.1.26) F8001 VLA Telemetry Kits		2018	VARIOUS / CHINA LAKE	C / FFP	CHINA LAKE	Mar 2018	Sep 2018	4	99,407.75	Y		
1.1.27) F8001 Suspension Bands (T107)		2016	United Terex Inc., Fairfield Village, PA / New MFG - Loc	C / FFP	NAVSUP, GLS	Jul 2016	Dec 2016	350	2,602.86	Y		Dec 2015
1.1.27) F8001 Suspension Bands (T107)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jun 2017	Jan 2018	300	2,312.94	Y		
1.1.27) F8001 Suspension Bands (T107)		2018	UNKNOWN / NAVSUP, GLS	C / TBD	NAVSUP, GLS	Mar 2018	Aug 2018	400	2,428.58	Y		
1.1.29) F8001 VLA Refurbishment Kits ^(†)		2016	LOCKHEED MARTIN - FY16 / Akron, OH	C / BOA	NAVSUP, GLS	Sep 2016	Mar 2018	11	690,909.09	Y		
1.1.29) F8001 VLA Refurbishment Kits ^(†)		2017	LOCKHEED MARTIN - FY17 / Akron, OH	C / BOA	NAVSUP, GLS	Nov 2016	Dec 2018	22	621,727.27	Y		
1.1.29) F8001 VLA Refurbishment Kits ^(†)		2018	LOCKHEED MARTIN - FY18 / Akron, OH	C / BOA	NAVSUP, GLS	May 2018	Jun 2020	22	640,425.91	Y		
1.1.32) F8001 MK 28 Stabilizer (TA68)		2017	United Terex, Inc / Fairfield Village, PA	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	600	2,003.24	Y		
1.1.32) F8001 MK 28 Stabilizer (TA68)		2018	United Terex, Inc / Fairfield Village, PA	C / FFP	NAVSUP, GLS	May 2018	Nov 2018	400	4,667.99	Y		
^(†) indicates the presence of a P-21												

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3							P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment													Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment													
Cost Elements (Units in Each)							Fiscal Year 2015													Fiscal Year 2016													BALANCE
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2014	BAL DUE AS OF 1 OCT	Calendar Year 2015													Calendar Year 2016													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
1.1.29) F8001 VLA Refurbishment Kits																																	
	1	2016	NAVY	11	0	11																										A -	11
	2	2017	NAVY	22	0	22																											22
	3	2018	NAVY	22	0	22																											22
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: FY 2018 Navy																							Date: May 2017										
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3										P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment													Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment										
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2017												Fiscal Year 2018												BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1.1.29) F8001 VLA Refurbishment Kits																																	
	1	2016	NAVY	11	0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11							0	
	2	2017	NAVY	22	0	22		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	
	3	2018	NAVY	22	0	22																					A	-	-	-	-	-	22
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017															
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3							P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment													Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment															
Cost Elements (Units in Each)							Fiscal Year 2019													Fiscal Year 2020													BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020															
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
1.1.29) F8001 VLA Refurbishment Kits																																			
	1	2016	NAVY	11	11	0																												0	
	2	2017	NAVY	22	0	22	-	-	22																										0
	3	2018	NAVY	22	0	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22				0				
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3					P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment				Item Number / Title [DODIC]: 1 / Lightweight Torpedo Support Equipment			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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 - FY16 - Akron, OH	11	22	33	0	0	18	18	0	0	0	0
2	LOCKHEED MARTIN - FY17 - Akron, OH	11	22	33	0	0	25	25	0	0	0	0
3	LOCKHEED MARTIN - FY18 - Akron, OH	11	22	33	0	0	25	25	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 2 / Recoverable Exercise Torpedo							
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:										
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total					
Procurement Quantity <i>(Units in Each)</i>				-		-		-		-		-		-					
Gross/Weapon System Cost <i>(\$ in Millions)</i>				12.706		0.000		0.000		0.000		0.000		0.000					
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-					
Net Procurement (P-1) <i>(\$ in Millions)</i>				12.706		0.000		0.000		0.000		0.000		0.000					
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-					
Total Obligation Authority <i>(\$ in Millions)</i>				12.706		0.000		0.000		0.000		0.000		0.000					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-					
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-		-		-		-		-		-					
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements		Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - F8003 LIGHTWEIGHT RECOVERABLE EXERCISE TORPEDO (REXTORP) Cost																			
Recurring Cost																			
1.1.1) Lightweight REXTORP Bodies / Assembly & Test ^(†)		46,794.24	243	11.371	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.2) Lightweight REXTORP Fire Control Modules / Assembly & Test ^(†)		4,959.02	122	0.605	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.3) Lightweight REXTORP Containers / Assembly & Test		10,428.57	70	0.730	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost		-	-	12.706	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - F8003 LIGHTWEIGHT RECOVERABLE EXERCISE TORPEDO (REXTORP) Cost		-	-	12.706	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Gross/Weapon System Cost		-	-	12.706	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
†) indicates the presence of a P-5a																			

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 2 / Recoverable Exercise Torpedo				
Cost Elements	OCO	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) Lightweight REXTORP Bodies / Assembly & Test		2015	B-K MFG, ARAB AL / NUWC, KEYPORT	C / FFP	NUWC, KEYPORT	Jan 2015	Jun 2015	40	23,925.00	Y		
1.1.2) Lightweight REXTORP Fire Control Modules / Assembly & Test		2015	B-K MFG, ARAB AL / NUWC, KEYPORT	C / FFP	NUWC, KEYPORT	Jun 2015	Nov 2015	40	5,250.00	Y		

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3							P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity (Units in Each)				-			-			-			-			-			-		
Gross/Weapon System Cost (\$ in Millions)				294.755			44.240			34.711			43.257			0.000			43.257		
Less PY Advance Procurement (\$ in Millions)				-			-			-			-			-			-		
Net Procurement (P-1) (\$ in Millions)				294.755			44.240			34.711			43.257			0.000			43.257		
Plus CY Advance Procurement (\$ in Millions)				-			-			-			-			-			-		
Total Obligation Authority (\$ in Millions)				294.755			44.240			34.711			43.257			0.000			43.257		
(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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - F8100 - HEAVYWEIGHT EXERCISE AND EXPENDABLES AND COMPONENT REPLACEMENT Cost																					
Recurring Cost																					
1.1.1) F8100 Guidance and Control Assembly ^(†)	311,829.79	47	14.656	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.2) F8100 MK 62-1 A-Cable (CWFP) ^(†)	7,729.03	310	2.396	3,500.00	60	0.210	4,442.98	50	0.222	3,870.88	50	0.194	-	-	0.000	3,870.88	50	0.194			
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE) ^(†)	287.29	4,800	1.379	83.08	650	0.054	250.00	300	0.075	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.4) F8100 MK 62-1 A-Cable Receptacle (CWLD)	-	-	3.078	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.5) F8100 Flex Hose (Improved) (CWQC) ^(†)	9,643.96	910	8.776	2,517.50	400	1.007	2,348.83	360	0.846	2,466.27	400	0.987	-	-	0.000	2,466.27	400	0.987			
1.1.6) F8100 Strong Flex Hose (WW97) ^(†)	2,169.57	230	0.499	1,290.00	100	0.129	1,420.51	150	0.213	1,491.53	150	0.224	-	-	0.000	1,491.53	150	0.224			
1.1.7) F8100 Igniter (TH01) ^(†)	1,126.04	2,412	2.716	572.73	550	0.315	678.37	504	0.342	712.29	504	0.359	-	-	0.000	712.29	504	0.359			
1.1.8) F8100 Propellant (WW98) ^(†)	3,097.33	3,000	9.292	1,932.00	500	0.966	1,773.45	1,000	1.773	1,810.71	1,000	1.811	-	-	0.000	1,810.71	1,000	1.811			

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3							P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
1.1.9) F8100 Scuttle Valve (SW94) ^(†)	827.78	180	0.149	1,000.00	30	0.030	999.40	84	0.084	-	-	0.000	-	-	0.000	-	-	0.000
1.1.10) F8100 Sub Wire Coil (TW92) ^(†)	9,218.69	2,675	24.660	3,986.00	500	1.993	3,806.19	500	1.903	3,996.50	625	2.498	-	-	0.000	3,996.50	625	2.498
1.1.11) F8100 Torpedo Wire Coil (SW83) ^(†)	19,461.60	1,250	24.327	-	-	0.000	-	-	0.000	6,191.81	550	3.405	-	-	0.000	6,191.81	550	3.405
1.1.12) F8100 OTTO Fuel - Moser Plant Warm	-	-	4.000	-	-	3.600	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.13) F8100 Otto Fuel	-	-	22.427	-	-	3.000	-	-	6.674	-	-	6.886	-	-	0.000	-	-	6.886
1.1.14) F8100 Crossover Batteries (CWRG) ^(†)	3,641.15	2,600	9.467	-	-	0.000	2,566.74	700	1.797	2,695.08	625	1.684	-	-	0.000	2,695.08	625	1.684
1.1.15) F8100 Sonobuoys ^(†)	2,185.19	486	1.062	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.16) F8100 A/B Dampening Material	-	-	0.870	-	-	0.146	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.17) F8100 SWT Target Procurement	-	-	0.215	-	-	0.061	-	-	0.062	-	-	0.062	-	-	0.000	-	-	0.062
1.1.18) F8100 ORDALTS	-	-	2.197	-	-	0.467	-	-	0.409	-	-	0.421	-	-	0.000	-	-	0.421
1.1.19) F8100 Deep Proofer Kits 1 ^(†)	4,691.11	450	2.111	2,533.33	120	0.304	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.20) F8100 Deep Proofer Kits 2 ^(†)	4,462.22	450	2.008	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
1.1.21) F8100 Short Wire Coils (CWRT) ^(†)	2,741.54	650	1.782	4,210.91	550	2.316	5,692.50	400	2.277	-	-	0.000	-	-	0.000	-	-	0.000
1.1.22) F8100 Replacement Nose Arrays ^(†)	-	-	0.000	229,520.00	50	11.476	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	138.067	-	-	26.074	-	-	16.677	-	-	18.531	-	-	0.000	-	-	18.531
Subtotal: Hardware - F8100 - HEAVYWEIGHT EXERCISE AND EXPENDABLES AND COMPONENT REPLACEMENT Cost	-	-	138.067	-	-	26.074	-	-	16.677	-	-	18.531	-	-	0.000	-	-	18.531

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment							Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment					
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - F8101 - HEAVYWEIGHT OTHER EQUIPMENT INVESTMENT Cost																		
Recurring Cost																		
2.1.1) Heavyweight Other Equipment Investment	-	-	101.379	-	-	13.255	-	-	10.850	-	-	17.202	-	-	0.000	-	-	17.202
Subtotal: Recurring Cost	-	-	101.379	-	-	13.255	-	-	10.850	-	-	17.202	-	-	0.000	-	-	17.202
Subtotal: Hardware - F8101 - HEAVYWEIGHT OTHER EQUIPMENT INVESTMENT Cost	-	-	101.379	-	-	13.255	-	-	10.850	-	-	17.202	-	-	0.000	-	-	17.202
Support - F8843 - HEAVYWEIGHT QUALITY ASSURANCE Cost																		
3.1) Heavyweight Quality Assurance	-	-	2.842	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Support - F8843 - HEAVYWEIGHT QUALITY ASSURANCE Cost	-	-	2.842	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Support - F8833 - HEAVYWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost																		
4.1) Heavyweight Production Engineering (In-House)	-	-	39.555	-	-	2.386	-	-	5.450	-	-	5.784	-	-	0.000	-	-	5.784
Subtotal: Support - F8833 - HEAVYWEIGHT PRODUCTION ENGINEERING - IN HOUSE Cost	-	-	39.555	-	-	2.386	-	-	5.450	-	-	5.784	-	-	0.000	-	-	5.784
Support - F8863 - HEAVY WEIGHT ACCEPTANCE TEST AND EVALUATION Cost																		
5.1) Heavyweight Acceptance Test and Evaluation	-	-	4.198	-	-	1.625	-	-	0.834	-	-	0.840	-	-	0.000	-	-	0.840
Subtotal: Support - F8863 - HEAVY WEIGHT ACCEPTANCE TEST AND EVALUATION Cost	-	-	4.198	-	-	1.625	-	-	0.834	-	-	0.840	-	-	0.000	-	-	0.840
Support - F8893 - HEAVYWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost																		
6.1) Heavyweight Production Engineering - Contractor	-	-	8.714	-	-	0.900	-	-	0.900	-	-	0.900	-	-	0.000	-	-	0.900
Subtotal: Support - F8893 - HEAVYWEIGHT PRODUCTION ENGINEERING - CONTRACTOR Cost	-	-	8.714	-	-	0.900	-	-	0.900	-	-	0.900	-	-	0.000	-	-	0.900

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3						P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment						Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment						
ID Code (A=Service Ready, B=Not Service Ready) :									MDAP/MAIS Code:									
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
Gross/Weapon System Cost	-	-	294.755	-	-	44.240	-	-	34.711	-	-	43.257	-	-	0.000	-	-	43.257

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3				P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment			
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) F8100 Guidance and Control Assembly		2014	Various / Various	C / FFP	NUWC, KEYPORT	Jul 2014	Jul 2016	47	311,829.79	Y		Apr 2012
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2015	DCX-CHOL / Chatsworth, CA	C / FFP	NAVSUP, GLS	Oct 2015	May 2016	60	3,200.00	Y		Apr 2015
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2016	Tyco Electronics Corporation, Boca Raton, Florida / NAVSUP GLS	C / FFP	NAVSUP, GLS	Jun 2016	Dec 2016	60	3,500.00	Y		Oct 2015
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Apr 2017	Oct 2017	50	4,442.98	Y		
1.1.2) F8100 MK 62-1 A-Cable (CWFP)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Apr 2018	Oct 2018	50	3,870.88	Y		
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE)		2015	SEACON PHOENIX, LLC / ASHAWAY, RI	C / FFP	NAVSUP, GLS	Apr 2015	Sep 2015	800	78.75	Y		Oct 2014
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE)		2016	SEACON PHOENIX, LLC / ASHAWAY, RI	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	650	83.08	Y		Oct 2015
1.1.3) F8100 MK 62-1 A-Cable Insert (CWLE)		2017	TBD / TBD	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	300	250.00	Y		
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2015	HL Technologies LP / Stafford, TX	C / FFP	NAVSUP, GLS	Apr 2015	Nov 2015	400	2,397.50	Y		Oct 2014
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2016	Cortland Company, Inc / Cortland, NY	C / FFP	NAVSUP, GLS	Apr 2016	Oct 2016	400	2,517.50	Y		Jan 2015
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2017	TBD / TBD	C / FFP	NAVSUP, GLS	May 2017	Nov 2017	360	2,348.83	Y		
1.1.5) F8100 Flex Hose (Improved) (CWQC)		2018	TBD / TBD	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	400	2,466.27	Y		
1.1.6) F8100 Strong Flex Hose (WW97)		2015	PRECISION HOSE INC. / STONE MOUNTAIN, GA	C / FFP	NAVSUP, GLS	Jan 2015	Jun 2015	100	1,230.00	Y		Oct 2014
1.1.6) F8100 Strong Flex Hose (WW97)		2016	PRECISION HOSE INC. / STONE MOUNTAIN, GA	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	100	1,290.00	Y		Oct 2015
1.1.6) F8100 Strong Flex Hose (WW97)		2017	TBD / TBD	C / FFP	NAVSUP, GLS	May 2017	Oct 2017	150	1,420.51	Y		
1.1.6) F8100 Strong Flex Hose (WW97)		2018	TBD / TBD	C / TBD	NAVSUP, GLS	Mar 2018	Sep 2018	150	1,491.53	Y		
1.1.7) F8100 Igniter (TH01)		2015	Pacific Scientific / Chandler, AZ	C / FFP	NAVSUP, GLS	Jan 2015	Jun 2015	504	545.63	Y		Oct 2014
1.1.7) F8100 Igniter (TH01)		2016	Pacific Scientific / Chandler, AZ	C / FFP	NAVSUP, GLS	Apr 2016	Sep 2016	550	572.73	Y		Jan 2016
1.1.7) F8100 Igniter (TH01)		2017	TBD / TBD	C / FFP	NAVSUP, GLS	Aug 2017	Jan 2018	504	678.37	Y		
1.1.7) F8100 Igniter (TH01)		2018	TBD / TBD	C / TBD	NAVSUP, GLS	Mar 2018	Aug 2018	504	712.29	Y		
1.1.8) F8100 Propellant (WW98)		2015	ALLIANT TECH / ELKTON, MD	C / FFP	NAVSUP, GLS	May 2015	Dec 2015	1,000	1,840.00	Y		Jan 2015
1.1.8) F8100 Propellant (WW98)		2016	ALLIANT TECH FY16 / ELKTON, MD	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	500	1,932.00	Y		Oct 2015

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3			P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment					Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.8) F8100 Propellant (WW98)		2017	ALLIANT TECH / ELKTON, MD	C / FFP	NAVSUP, GLS	Jan 2017	Aug 2017	1,000	1,773.45	Y		
1.1.8) F8100 Propellant (WW98)		2018	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Mar 2018	Sep 2018	1,000	1,810.71	Y		
1.1.9) F8100 Scuttle Valve (SW94)		2015	Cartridge Actuated Devices / Fairfield, NJ	C / FFP	NAVSUP, GLS	Nov 2015	Jul 2016	30	966.67	Y		May 2015
1.1.9) F8100 Scuttle Valve (SW94)		2016	Cartridge Actuated Devices FY16 / Fairfield, NJ	C / FFP	NAVSUP, GLS	Jan 2016	Jun 2016	30	1,000.00	Y		Oct 2015
1.1.9) F8100 Scuttle Valve (SW94)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Apr 2017	Sep 2017	84	999.40	Y		
1.1.10) F8100 Sub Wire Coil (TW92)		2015	Entwistle Company / Hudson, MA	C / FFP	NAVSUP, GLS	Jan 2015	Jun 2015	600	3,770.00	Y		Oct 2014
1.1.10) F8100 Sub Wire Coil (TW92)		2016	Eagle Pitcher Technologies / Joplin, MO	C / FFP	NAVSUP, GLS	May 2016	Nov 2016	500	3,986.00	Y		Jan 2016
1.1.10) F8100 Sub Wire Coil (TW92)		2017	UNKNOWN / NAVSUP GLS	C / FFP	NAVSUP, GLS	Jul 2017	Feb 2018	500	3,806.19	Y		
1.1.10) F8100 Sub Wire Coil (TW92)		2018	UNKNOWN / NAVSUP GLS	C / TBD	NAVSUP, GLS	Mar 2018	Oct 2018	625	3,996.50	Y		
1.1.11) F8100 Torpedo Wire Coil (SW83)		2015	ENTWISTLE / HUDSON, MA	C / FFP	NAVSUP, GLS	Jan 2015	Jun 2015	500	4,652.00	Y		Oct 2014
1.1.11) F8100 Torpedo Wire Coil (SW83)		2018	TBD / TBD	C / TBD	NAVSUP-WSS	Mar 2018	Sep 2018	550	6,191.81	Y		
1.1.14) F8100 Crossover Batteries (CWRG)		2015	EAGLEPITCHER TECH / JOPLIN, MO	C / FFP	NAVSUP, GLS	Aug 2015	Jan 2016	400	2,742.50	Y		May 2015
1.1.14) F8100 Crossover Batteries (CWRG)		2017	UNKNOWN / NAVSUP, GLS	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	700	2,566.74	Y		
1.1.14) F8100 Crossover Batteries (CWRG)		2018	UNKNOWN / NAVSUP, GLS	C / TBD	NAVSUP, GLS	Mar 2018	Aug 2018	625	2,695.08	Y		
1.1.15) F8100 Sonobuoys		2015	VARIOUS / VARIOUS	C / FFP	NUWC, KEYPORT	May 2015	Nov 2015	96	2,251.00	Y		Feb 2015
1.1.19) F8100 Deep Proofer Kits 1		2015	Ordnance Technology Service Inc. / NUWC, Newport	C / FFP	NUWC, NEWPORT	Oct 2015	Mar 2016	150	2,460.00	Y		May 2015
1.1.19) F8100 Deep Proofer Kits 1		2016	Ordnance Technology Service Inc. / NUWC, Newport	C / FFP	NUWC, NEWPORT	Jan 2016	Jun 2016	120	2,533.33	Y		Oct 2015
1.1.20) F8100 Deep Proofer Kits 2		2015	Ordnance Technology Service Inc. / NUWC, Newport	C / FFP	NUWC, NEWPORT	Jan 2015	Jun 2015	150	3,500.00	Y		Oct 2014
1.1.21) F8100 Short Wire Coils (CWRT)		2015	Entwistle Company / Hudson, MA	C / FFP	NAVSUP, GLS	Nov 2015	Mar 2016	650	2,741.54	Y		Jun 2015
1.1.21) F8100 Short Wire Coils (CWRT)		2016	Eagle Pitcher Technologies / Joplin, MO	C / FFP	NAVSUP, GLS	Jul 2016	Dec 2016	550	4,210.91	Y		Dec 2015
1.1.21) F8100 Short Wire Coils (CWRT)		2017	Eagle Pitcher Technologies / Joplin, MO	C / FFP	NAVSUP, GLS	Jul 2017	Dec 2017	400	5,692.50	Y		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 03 / 3				P-1 Line Item Number / Title: 3301 / Torpedo Support Equipment				Item Number / Title [DODIC]: 3 / Heavyweight Torpedo Support Equipment				
Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.22) F8100 Replacement Nose Arrays		2016	NORTHROP GRUMMAN SYSTEMS CORPORATION / NEWPORT	C / FFP	NUWC, NEWPORT	Mar 2017	Nov 2017	50	229,520.00	Y		Oct 2015

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 3: Support Equipment							P-1 Line Item Number / Title: 3302 / ASW Range Support					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	44.468	3.699	3.706	3.864	0.000	3.864	3.939	4.017	4.106	4.188	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	44.468	3.699	3.706	3.864	0.000	3.864	3.939	4.017	4.106	4.188	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	44.468	3.699	3.706	3.864	0.000	3.864	3.939	4.017	4.106	4.188	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: The Anti-Submarine Warfare (ASW) Range program provides test and training tracking equipment for both Contiguous United States (CONUS) and Outside Contiguous United States (OCONUS). This equipment is used for ground truth tracking of participants during Fleet training exercises and torpedo firings and directly supports reconstruction and analysis for Undersea Warfare (USW) proficiency assessment and test, evaluation & analysis. The infrastructure supported includes: Southern California Offshore Range (SCORE), Barking Sands Tactical Underwater Range/Barking Sands Underwater Range Extension (BARSTUR/BSURE), Pacific Northwest Range Complex (Dabob and Nanoose), Atlantic Undersea Test and Evaluation Center (AUTC), Portable Offshore Training Range (POTR), Portable Undersea Training Range (PUTR) and other portable capabilities abroad in support of Forward Deployed Naval Forces (FDNF) training requirements. [P5 / F4001 - UTRE/PINGER EXERCISE EQUIPMENT]: Underwater tracking equipment is placed in weapons and other underwater vehicles for tracking during training and Test and Evaluation (T&E) exercises, and to ensure safe operation and movement of all craft and weapons on fixed and portable ranges for the Underwater Tracking Range Equipment (UTRE)/Pinger program. Funding is used to procure equipment for T&E exercises in addition to improvement and modernization projects. [P5 / F4006 - STATIONARY TARGET EQUIPMENT MK28]: The stationary target equipment includes the MK 28 Targets and all equipment used for conducting Service Weapons Tests (SWT) on in-service and advanced war-shot torpedoes. The SWT is the only test the Navy has to verify the explosive train of lightweight and heavyweight torpedoes. Funding is used to procure target systems and equipment for SWT in addition to improvement and modernization projects. [P5 / F4830 - PRODUCTION ENGINEERING - UTRE]: Funds for production engineering efforts performed by a field activity or contractor during the production phase of these projects. [P5 / F4850 - PRODUCT IMPROVEMENT - UTRE]: Product improvement for fixed and portable range and fleet equipment.												
Justification: The Anti-Submarine Warfare (ASW) Range program provides underwater tracking equipment and fleet equipment for use on underwater fixed and portable ranges.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 03: Torpedoes and Related Equipment / BSA 4: Destination Transportation							P-1 Line Item Number / Title: 2410 / First Destination Transportation					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	18.689	3.342	3.804	3.961	0.000	3.961	3.878	3.960	4.043	4.124	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	18.689	3.342	3.804	3.961	0.000	3.961	3.878	3.960	4.043	4.124	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	18.689	3.342	3.804	3.961	0.000	3.961	3.878	3.960	4.043	4.124	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>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: First Destination Transportation (FDT) provides for the movement of newly procured weapons related equipment and material from the contractor's plant to the initial point of receipt for subsequent shipment to its destination. Prior to FY 2014, all funds were allocated to and managed by Naval Supply Systems Command (NAVSUP). Starting in FY2014, funds have been decentralized for allocation, management and oversight to the specific commands.												
Justification: FY 2018 funds are required for transportation costs for shipments of weapons related equipment and material to its initial destination from the contractor's plant.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 1: Guns and Gun Mounts							P-1 Line Item Number / Title: 4129 / Small Arms and Weapons					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	130.670	14.237	18.002	11.332	1.500	12.832	11.908	11.564	11.800	12.281	-	223.294
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	130.670	14.237	18.002	11.332	1.500	12.832	11.908	11.564	11.800	12.281	-	223.294
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	130.670	14.237	18.002	11.332	1.500	12.832	11.908	11.564	11.800	12.281	-	223.294
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: This line item procures the initial issue of weapons, modernization, standardization and stock replenishment of a wide variety of Small Arms and weapons (caliber .50 and below) to meet Small Arms allowances and inventory objectives, including required gun mounts and associated support components. This line also provides sufficient types and quantities of weapons to support training, afloat security forces and shore missions of approximately 1,300 ship/ashore activities Navy-wide including the Naval Mobile Construction Battalions, Naval Construction Force Support Units, Construction Battalion Maintenance Units, Mobile Security Force, Marine Corps Security Force Battalion and Master at Arms. Quantities of weapons procured with the above funding are to meet Small Arms allowances and inventory objectives. This line item also procures a range of weapons and small arms considered service common equipment for Naval Special Warfare (NSW) such as assault and sniper rifles, handguns, machine guns, mortar firing systems, and a variety of components including gun sights, gun mounts, combat and thermal optics and other related equipment. This funding supports the inventory objectives and service-common Small Arms allowances for NSW. Justification: Funding in FY2018 supports meeting Navy inventory objectives, including the XM17 Modular Handgun System (MHS) service pistol and the 5.56 carbine. Funding also supports Naval Special Warfare efforts support the NSW service common inventory allowance and includes the phased replacement of M16 rifles to the M4A1N 5.56mm carbine as well as the replacement of the MK14 series 7.62x51MM enhanced battle rifle (EBR) with the Compact Semi-automatic Sniper System (CSASS). Funding supports procuring 6 SSAM/MK 50, 56 MK 48, 600 M4A1 5.56MM Carbine, 100 M240B 7.62MM MG, 100 CSASS, associated transportation, and production engineering for Expeditionary Warfare. Funding supports procuring 2,505 M4A1 5.56MM Carbine, 18,000 MHS, XM17, and 200 MK 87-M4 UPPER and production engineering for Surface Warfare. OCO: FY 2018 OCO funding is required to replenish and reset 60MM Mortar Systems (M224) and related components used by Naval Special Warfare (NSW) in combat operations and expended in theater in direct support of Operation Inherent Resolve (OIR).												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts							P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,518.713	54.656	50.900	72.698	0.000	72.698	44.165	57.136	49.406	33.537	94.881	1,976.092
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,518.713	54.656	50.900	72.698	0.000	72.698	44.165	57.136	49.406	33.537	94.881	1,976.092
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,518.713	54.656	50.900	72.698	0.000	72.698	44.165	57.136	49.406	33.537	94.881	1,976.092
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
Phalanx Close-In Weapon System (CIWS) is an autonomous combat system that searches, detects, tracks (radar and electro-optic), and engages threats with a 20mm Gatling gun capable of firing 4,500 tungsten penetrator rounds per minute. Integral to ship self-defense and the anti-air warfare "defense-in-depth" concept, CIWS provides terminal defense against anti-ship missiles and high-speed aircraft penetrating other fleet defenses. Phalanx CIWS can operate autonomously or be integrated with a ship's combat system. The Block 1B configuration provides further defense against asymmetric threats such as small, fast surface craft, slow-flying fixed and rotary-winged aircraft, and unmanned aerial vehicles through the addition of an integrated Forward-Looking Infra-Red (FLIR) sensor. Block 1B also incorporates an Optimized Gun Barrel (OGB) for tighter ordnance dispersion. Enhanced Lethality Cartridges (ELC) can be used with the OGB for improved target penetration. The CIWS SeaRAM is a CIWS Phalanx Block 1B with the 20mm Gatling gun removed and replaced by an eleven round guide that utilizes the Rolling Airframe Missile (RAM) Block 1A or Block 2 missiles for extended Anti-Ship Missile coverage. The resulting system is designated MK 15 Mod 31/32 CIWS SeaRAM and shares a minimum of 85% hardware and software commonality of the CIWS Phalanx system. [P5 / DT001 CIWS BLOCK 1B]: This line is an upgrade/conversion to CIWS incorporating a stabilized thermal imager and an automatic acquisition video tracker that provides the additional capability to engage small, high speed, maneuvering surface craft and low, slow aircraft and helicopters. The thermal imager also improves performance against Anti-Ship Cruise Missiles by providing more accurate angle tracking information to the fire control computer. CIWS Block 1B is scheduled to be installed on the following ship classes: CGs, CVNs, DDGs, LCCs, LHAs, LHDs, LPDs, LSDs, WMSLs and trainers. The installations will be completed during a limited availability by Shipalt/AIT. Starting in FY 2018 funding includes four (4) additional SeaRAM installations on Rota based DDGs.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts						P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	Block 1B Baseline 2 Radar Upgrades				- / 176.416	- / 10.943	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-40a	CIWS Block 1 B				- / 1,107.867	- / 7.103	- / 6.402	- / 3.210	- / 0.000	- / 3.210
P-5	1 / Close-In Wpns Sys (CIWS) Mods				- / 234.430	- / 36.610	- / 44.498	- / 69.488	- / 0.000	- / 69.488
P-40	Total Gross/Weapon System Cost				- / 1,518.713	- / 54.656	- / 50.900	- / 72.698	- / 0.000	- / 72.698
*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: There are 231 U.S. shipboard systems, 4 trainers and 3 Engineering Development Module (EDM)/Periodic Conformance Inspection (PCI) mounts procured in the Program of Record. This budget provides for installation of 4 Coast Guard Maritime Security Cutter Large (WMSLs) and 2 CG-71 systems procured under separate budget line items. This budget also provides for the installation of 2 LSD systems reconstituted from decommissioned assets. This budget provides for the procurement of Block 1B Baseline 2 Radar Upgrades. This is a new state of the art digital radar that provides improved performance and increased reliability. It mitigates 200 obsolete components inherent in the existing analog radar by introducing advanced commercial-off-the-shelf based signal processing coupled with new low noise signal source. It provides a 2x sensitivity increase along with expanded Doppler (velocity) coverage required for detection and tracking of advanced Anti Ship Cruise Missile (ASCM) and asymmetric threats, provides a 10% increase in system level reliability and provides a 15% reduction in sailor man-hours required for CIWS planned system maintenance. This was previously included in the Engineering Change Proposal (ECP)/Ordinance Alteration (ORDALT) line and now is shown separately. This budget provides for the procurement of CIWS Reliability, Maintainability and Availability (RM&A) roadmap that will provide system improvements and allow time between Class "A" overhauls to be extended while still maintaining an acceptable operational availability (Ao). The RM&A Kit #1 improvements include the following: coolant pump with improved impeller, long-life gyros, Transmitter Mode Control Unit (TMCU) improvement, Built-in-Test Equipment (BITE) Control Circuit Card Assembly (CCA), Waveguide Air Dryer System (WADS) piston compressor, WADS water separator, Gun and Ammunition Handling System (GAHS) chuting, gun cradle cable assembly, main cable reliability improvements, and resolver improvements. The RM&A Kit #2 improvements primarily include Higher Reliability Phalanx Thermal Imager (HRPTI). These RM&A improvements will be installed during overhauls or by standalone shipboard Alteration Installation Teams (AIT). FY 2018 funding increase to support BLOCK 1B RM&A ROADMAP. FY 2018 funding increased to support additional SeaRAM installations on four (4) Rota based DDGs.										

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Navy										Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2					P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods					Aggregated Items Title: Block 1B Baseline 2 Radar Upgrades	

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
B Kits/Recurring																				
Block 1B Baseline 2 Radar Upgrades	A		708,497.99	249	176.416	1,094K	10	10.943	-	-	-	-	-	-	-	-	-	-	-	
Subtotal: B Kits/Recurring			-	-	176.416	-	-	10.943	-	-	-	-	-	-	-	-	-	-	-	
Total			-	-	176.416	-	-	10.943	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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

Remarks:

Models of Systems Affected: CIWS Block 1B Block 1B Baseline 2 Radar Upgrades
Type Modification: ECP/ORDALT

The CIWS Block 1B Baseline 2 Radar Upgrade (RUG) Kit is required for CGs, CVNs, DDGs, LCCs, LHAs, LHDs, LPDs, LSDs and WMSLs platforms. The CIWS Block 1B Baseline 2 RUG kit is new state of the art digital radar that provides improved performance and increased reliability. It mitigates 200 obsolete components inherent in the existing analog radar by introducing advanced COTS-based signal processing coupled with new low noise signal source. It provides a 2x sensitivity increase along with expanded Doppler (velocity) coverage required for detection and tracking of advanced ASCM and asymmetric threats, provides a 10% increase in system level reliability and provides a 15% reduction in sailor man-hours required for CIWS planned system maintenance.

There are no install costs as all RUG kits are being installed into mounts at the contractor facility. Lessons learned from change out of RUG kits and limited pierside resources, makes the RUG kit install at contractor facility the best low cost, low risk approach for install. Contractor facility unique testing requirements and set up are required for proper RUG kit installation and critical alignment into a CIWS mount. RUG kits will be provided to the contractor as GFE during mount upgrades and overhauls.

Radar Upgrade kit unit costs vary due to different configurations of the mounts to be upgraded. There is a mixture of Block 1B Baseline 0 to Block 1B Baseline 2 and Block 1B Baseline 1 to Block 1B Baseline 2 configurations to support the different mount configurations in the Fleet.

Of the 10 procurements in FY 2016, 5 are Block 1B Baseline 1 to Block 1B Baseline 2 configurations, 5 are Block 1B Baseline 0 to Block 1B Baseline 2 configurations. FY16 was the last year of procurement for Radar Upgrade kits.

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Exhibit P-40a, Budget Item Justification For Aggregated Items: FY 2018 Navy																Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods									Aggregated Items Title: CIWS Block 1 B					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
B Kits/Non-Recurring																				
CIWS Block 1B -- Procurement	A		2,116K	239	505.717	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIWS Block 1B -- Installation	A		-	-	137.464	-	-	7.103	-	-	6.402	-	-	3.210	-	-	-	-	-	3.210
Modification Kits CIWS Block 1B Conversion and Upgrade	A		-	-	464.686	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: B Kits/Non-Recurring			-	-	1,107.867	-	-	7.103	-	-	6.402	-	-	3.210	-	-	-	-	-	3.210
Total			-	-	1,107.867	-	-	7.103	-	-	6.402	-	-	3.210	-	-	0.000	-	-	3.210
Note: Subtotals or Totals in this Exhibit P-40a may not be exact or sum exactly, due to rounding.																				
Remarks: Models of Systems Affected: DT001 CIWS Block 1B CIWS Block 1B Type Modification: Phalanx CIWS Block 1 The Block 1B surface mount includes the addition of a thermal imager, an automatic acquisition video tracker, and stabilization system for the tracker. The upgrade is essential to provide the Fleet capability against small high speed surface threats and low speed air threats. Installation schedule reflects the installation and the CIWS Block 1B and the modification kits CIWS Block 1B conversion upgrade. These 2 cost elements are incorporated into the mount at the factory and the complete mount is installed. The installation schedule includes 231 shipboard systems in the Program of Record (POR) and an additional 4 WMSL, 2 CG47 TICONDEROGA class and four (4) SeaRAM systems for Rota-based DDGs procured under separate budget line items. This budget also provides for the installation of 2 LSD systems reconstituted from decommissioned assets. The budget also provides for the Design Service Allocation (DSA) efforts associated with the planning year ship checks, Ship Installation Drawing (SID) development, installation on-site support and Ship Selected Record (SSR) updates.																				

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017								
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2							P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods						Item Number / Title [DODIC]: 1 / Close-In Wpns Sys (CIWS) Mods								
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:											
Resource Summary				Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total		
Procurement Quantity <i>(Units in Each)</i>				-			-			-			-			-			-		
Gross/Weapon System Cost <i>(\$ in Millions)</i>				234.430			36.610			44.498			69.488			0.000			69.488		
Less PY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Net Procurement (P-1) <i>(\$ in Millions)</i>				234.430			36.610			44.498			69.488			0.000			69.488		
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Total Obligation Authority <i>(\$ in Millions)</i>				234.430			36.610			44.498			69.488			0.000			69.488		
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																					
Initial Spares <i>(\$ in Millions)</i>				-			-			-			-			-			-		
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-			-			-			-			-			-		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - DT001 CIWS BLOCK 1B Cost																					
Recurring Cost																					
1.1.1) Trainer Installation	74,250.00	4	0.297	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.2) ECP/ORDALT	-	-	21.754	-	-	11.600	-	-	3.058	-	-	3.118	-	-	0.000	-	-	3.118			
1.1.3) TRAINER UPGRADE/ CONVERSION	1,908K	4	7.633	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.4) TRAINER	1,916K	4	7.666	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.5) BLOCK 1B RM&A ROADMAP	-	-	31.501	-	-	7.445	-	-	17.804	-	-	20.266	-	-	0.000	-	-	20.266			
1.1.6) GRAY RADOMES	-	-	1.880	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000			
1.1.7) PRODUCTION ENGINEERING	-	-	110.559	-	-	3.565	-	-	3.636	-	-	3.784	-	-	0.000	-	-	3.784			
1.1.8) Sensor Upgrades	-	-	17.200	-	-	14.000	-	-	20.000	-	-	12.500	-	-	0.000	-	-	12.500			
1.1.9) SeaRAM ROTA DDG ⁽¹⁾	-	-	35.940	-	-	0.000	-	-	0.000	-	-	29.820	-	-	0.000	-	-	29.820			
Subtotal: Recurring Cost	-	-	234.430	-	-	36.610	-	-	44.498	-	-	69.488	-	-	0.000	-	-	69.488			
Subtotal: Hardware - DT001 CIWS BLOCK 1B Cost	-	-	234.430	-	-	36.610	-	-	44.498	-	-	69.488	-	-	0.000	-	-	69.488			
Gross/Weapon System Cost	-	-	234.430	-	-	36.610	-	-	44.498	-	-	69.488	-	-	0.000	-	-	69.488			

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4205 / Close-In Wpns Sys (CIWS) Mods	Item Number / Title [DODIC]: 1 / Close-In Wpns Sys (CIWS) Mods
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

Footnotes:

(1) FY 2018 Funding increased for additional four (4) SeaRAM on ROTA based DDGs.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts							P-1 Line Item Number / Title: 4206 / Coast Guard Weapons					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	87.602	14.705	25.295	38.931	0.000	38.931	42.606	58.688	59.830	61.008	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	87.602	14.705	25.295	38.931	0.000	38.931	42.606	58.688	59.830	61.008	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	87.602	14.705	25.295	38.931	0.000	38.931	42.606	58.688	59.830	61.008	Continuing	Continuing
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares (\$ in Millions)	-	0.376	0.228	0.810	-	0.810	0.395	0.737	0.638	0.701	Continuing	Continuing
Flyaway Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Dollars)	-	-	-	-	-	-	-	-	-	-	-	-
Description:												
The Coast Guard Weapons line funds the Coast Guard combat system suite for the United States Coast Guard (USCG) cutters under the Coast Guard surface asset acquisition program. Under inter-service agreement (delineated in OPNAVINST 4000.79B), DON plans, programs, and budgets for specific Navy military equipment, systems and logistic support requirements for USCG units to ensure the USCG is prepared to execute naval warfare tasks in consonance with United States Navy (USN) units. Ship construction and installation costs are funded under the Department of Homeland Security appropriation.												
The combat systems and weapons suite will be aligned with future naval ship building programs to support commonality among the two service's systems and meet national fleet objectives. The combat system suite must complement and integrate with Navy combat systems. The suite is an appropriate balance of equipment to ensure the USCG is prepared to accomplish the assigned naval warfare tasks in concert with USN units. The surface asset acquisition program combat suites include the following:												
[P5 / CG002 MK 110 GUN]: Provides the MK 110 gun to engage surface threats, independently or in cooperation with other forces, achieving mission kill on high-speed coastal patrol craft beyond small and intermediate caliber gunfire effective range. Includes gun mount, equipment procurement, recurring engineering, and ILS support for the Coast Guard Maritime Security Cutter Large (WMSL) and the Offshore Patrol Cutter (OPC) in accordance with OPNAVINST 4000.79B and the Naval Operational Capabilities (NOC) document.												
[P5 / CG003 MK 160 GCS]: Provides the MK 160 Mod 12 Gun Computer System (GCS) including equipment procurement, production support, systems engineering, data, and software and test support for the WMSL Class and the OPC Class. The MK 160 GCS is required to plan and direct surface threat engagements including the capability to fire warning shots, disabling fire and achieve mission kill against these threats in accordance with National Fleet Policy, OPNAVINST 4000.79B, and the NOC.												
FY 2017 - 2018 MK 160 GCS Software Update will upgrade the MK 160 GCS software load for Offshore Patrol Cutters (OPC). Software will be upgraded from previous revisions to integrate the MK 20 Mod 2 Electro-Optical Sight Sensor and to receive Multi-Mode Radar video. The planned software upgrade is required to fully operate and employ the MK 160 GCS as part of the overall MK 48 Gun Weapon System on the OPC.												
[P5 / CG004 MK 38 MACHINE GUN SYSTEMS]: Provides the MK 38 Mod 2/3 Machine Gun System (MGS) to plan and engage surface threats, achieving missions kill on high speed patrol craft beyond minor caliber gunfire effective range in accordance with OPNAVINST 4000.79B and the NOC. The MK 38 Mod 3 (vice Mod 2), which began production in FY 2015, permits greater effective range, greater range of elevation to engage air targets, and an improved Toplite electro-optical (EO) system. The MK 38 MGS increases shipboard self defense against small boat threats and is the main gun of the Fast Response Cutter (FRC) and the OPC Class. Includes the MK 38 gun mount, Toplite, cannon, and ancillary components, recurring engineering, outfitting spares, and ILS support.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts		P-1 Line Item Number / Title: 4206 / Coast Guard Weapons
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		
[P5 / CG005 COMBAT SYSTEM INTEGRATION]: Ensures successful integration and system interoperability of Navy type equipment that affects the combat system of USCG National Security Cutters (WMSLs), Fast Response Cutters (FRCs), and Offshore Patrol Cutters (OPC). Includes weapon system integration support for the OPC ATHENA Control, Correlation & Display (CCD) System which provides target queuing for Gun Weapon System engagements.		

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts						P-1 Line Item Number / Title: 4206 / Coast Guard Weapons				
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A			Other Related Program Elements: N/A			
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Coast Guard Weapons	P-5a, P-21			- / 87.602	- / 14.705	- / 25.295	- / 38.931	- / 0.000	- / 38.931
P-40	Total Gross/Weapon System Cost				- / 87.602	- / 14.705	- / 25.295	- / 38.931	- / 0.000	- / 38.931
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications. Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: FY 2018 funding increase to procure Navy Type/Navy Owned (NT/NO) combat system elements for the USCG National Security Cutters (WSML) 758. Funds procure Navy Type/Navy Owned (NT/NO) weapon systems, integrated logistics support (ILS), technical documentation, software, test and production support for USCG National Security Cutters (WSMLs), Fast Response Cutters (FRCs), and Offshore Patrol Cutters (OPC) being constructed under the Coast Guard Surface Asset Acquisition Program. These efforts are ongoing. FY 2018 funds procure the MK 110 gun, associated spares, and ILS support for the OPC 2 and WMSL 758; procure the MK 160 Gun Computer System and associated support for the OPC 2 and WMSL 758; procure a MK 160 Gun Computer System for shore based training; provide MK 160 test support for the WMSL 756; provide non-recurring engineering to upgrade the MK160 GCS software for the OPC class; procure the MK 38 Machine Gun System, associated spares/equipment, and ILS support for FRCs and the OPC 2; and provide combat system integration for WMSLs 755-757, FRCs 1116-1127, and OPC 1; and provide combat system integration support for the OPC ATHENA Control, Correlation & Display (CCD) System which provides target queuing for Gun Weapon System engagements. The MK 110 and the MK 38 are the primary weapon systems of the FRC and OPC respectively and are critical to their self-defense capabilities.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4206 / Coast Guard Weapons						Item Number / Title [DODIC]: 1 / Coast Guard Weapons						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				87.602		14.705		25.295		38.931		0.000		38.931				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				87.602		14.705		25.295		38.931		0.000		38.931				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Total Obligation Authority (\$ in Millions)				87.602		14.705		25.295		38.931		0.000		38.931				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares (\$ in Millions)				-		0.376		0.228		0.810		-		0.810				
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - CG002 MK 110 GUN Cost																		
Recurring Cost																		
1.1.1) 57MM GUN ^(†) (1)	8,032K	4	32.128	8,528K	1	8.528	8,690K	1	8.690	8,855K	2	17.710	-	-	-	8,855K	2	17.710
1.1.2) ILS SUPPORT (2)	-	-	10.454	-	-	0.891	-	-	1.641	-	-	1.702	-	-	-	-	-	1.702
Subtotal: Recurring Cost	-	-	42.582	-	-	9.419	-	-	10.331	-	-	19.412	-	-	-	-	-	19.412
Subtotal: Hardware - CG002 MK 110 GUN Cost	-	-	42.582	-	-	9.419	-	-	10.331	-	-	19.412	-	-	-	-	-	19.412
Hardware - CG003 MK 160 GCS Cost																		
Recurring Cost																		
2.1.1) SYSTEM ENGINEERING SUPPORT	-	-	1.138	-	-	0.202	-	-	-	-	-	-	-	-	-	-	-	-
2.1.2) PRODUCTION SUPPORT	-	-	3.300	-	-	0.448	-	-	-	-	-	-	-	-	-	-	-	-
2.1.3) DATA	-	-	0.807	-	-	0.470	-	-	-	-	-	-	-	-	-	-	-	-
2.1.4) SOFTWARE & TEST SUPPORT	-	-	1.182	-	-	0.245	-	-	0.250	-	-	0.250	-	-	-	-	-	0.250
2.1.5) ANCILLARY EQUIPMENT ^(†) (3)	-	-	-	522,500.00	2	1.045	-	-	-	-	-	-	-	-	-	-	-	-
2.1.6) GUN COMPUTER SYSTEM ^(†)	1,882K	1	1.882	-	-	-	1,506K	1	1.506	1,535K	3	4.605	-	-	-	1,535K	3	4.605

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4206 / Coast Guard Weapons						Item Number / Title [DODIC]: 1 / Coast Guard Weapons						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
2.1.7) MK160 GCS SOFTWARE UPDATE OPC ⁽⁴⁾	-	-	-	-	-	0.664	-	-	0.756	-	-	0.480	-	-	-	-	-	0.480
2.1.8) ILS SUPPORT ⁽⁵⁾	-	-	1.266	-	-	-	-	-	-	-	-	0.158	-	-	-	-	-	0.158
Subtotal: Recurring Cost	-	-	9.575	-	-	3.074	-	-	2.512	-	-	5.493	-	-	-	-	-	5.493
Subtotal: Hardware - CG003 MK 160 GCS Cost	-	-	9.575	-	-	3.074	-	-	2.512	-	-	5.493	-	-	-	-	-	5.493
Hardware - CG004 MK 38 MACHINE GUN SYSTEMS Cost																		
Recurring Cost																		
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC ^(†)	872,000.00	31	27.032	-	-	-	1,230K	6	7.380	1,254K	6	7.524	-	-	-	1,254K	6	7.524
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC ^(†)	-	-	-	-	-	-	1,230K	1	1.230	1,254K	1	1.254	-	-	-	1,254K	1	1.254
3.1.3) ILS SUPPORT FRC	-	-	4.658	-	-	0.931	-	-	2.286	-	-	2.328	-	-	-	-	-	2.328
3.1.4) ILS SUPPORT OPC	-	-	-	-	-	-	-	-	0.381	-	-	0.388	-	-	-	-	-	0.388
Subtotal: Recurring Cost	-	-	31.690	-	-	0.931	-	-	11.277	-	-	11.494	-	-	-	-	-	11.494
Subtotal: Hardware - CG004 MK 38 MACHINE GUN SYSTEMS Cost	-	-	31.690	-	-	0.931	-	-	11.277	-	-	11.494	-	-	-	-	-	11.494
Support - CG005 COMBAT SYSTEM INTEGRATION Cost																		
4.1) CSI ⁽⁶⁾	-	-	3.755	-	-	1.281	-	-	1.175	-	-	2.532	-	-	-	-	-	2.532
Subtotal: Support - CG005 COMBAT SYSTEM INTEGRATION Cost	-	-	3.755	-	-	1.281	-	-	1.175	-	-	2.532	-	-	-	-	-	2.532
Gross/Weapon System Cost	-	-	87.602	-	-	14.705	-	-	25.295	-	-	38.931	-	-	0.000	-	-	38.931
(†) indicates the presence of a P-5a																		
Footnotes:																		
(1) FY 2016 57mm Gun unit costs are based on actual awarded contract values.																		
(2) FY 2018 MK110 ILS support increase attributed to procurement of an additional gun mount for the WMSL 758.																		

(†) indicates the presence of a P-5a

Footnotes:

(1) FY 2016 57mm Gun unit costs are based on actual awarded contract values.

(2) FY 2018 MK110 ILS support increase attributed to procurement of an additional gun mount for the WMSL 758.

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Exhibit P-5, Cost Analysis: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4206 / Coast Guard Weapons	Item Number / Title [DODIC]: 1 / Coast Guard Weapons
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:
⁽³⁾ FY 2016 MK 160 Ancillary Equipment procures MK 119 Gun Computer System Cabinets (GCSC) for the WMSL 756 and 757. The MK 119 GCSC is a shock mounted rack enclosure which houses processors, electronic devices, cooling and power conditioning equipment that perform processing, interfacing and data extraction functions as part of the MK 160 MOD 12 Gun Computer System (GCS). The MK 160 GCS is part of the gun weapon system. ⁽⁴⁾ FY 2017 - 2018 MK 160 GCS software update funds provide non-recurring engineering to upgrade the MK 160 GCS software for Offshore Patrol Cutters (OPC). Software will be upgraded from previous revisions to integrate the MK 20 Mod 2 Electro-Optical Sight Sensor and to receive Multi-Mode Radar video. The planned software upgrade is required to fully operate and employ the MK 160 GCS as part of the overall MK 48 Gun Weapon System on the OPC. ⁽⁵⁾ FY 2018 MK 160 ILS support increase attributed to procurement of an additional gun computing system for WMSL 758. ⁽⁶⁾ FY 2018 increase attributed to additional integration efforts required for the OPC ATHENA Control, Correlation & Display (CCD) System which provides target queuing for Gun Weapon System engagements.		

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4206 / Coast Guard Weapons				Item Number / Title [DODIC]: 1 / Coast Guard Weapons				

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$)	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) 57MM GUN ^(†)		2013	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Sep 2014	Sep 2016	1	8,600K	Y		Jun 2010
1.1.1) 57MM GUN ^(†)		2015	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Oct 2015	Oct 2017	1	8,097K	Y		Oct 2013
1.1.1) 57MM GUN ^(†)		2016	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Dec 2015	Dec 2017	1	8,528K	Y		Oct 2013
1.1.1) 57MM GUN ^(†)		2017 ⁽⁷⁾	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	May 2017	May 2019	1	8,690K	Y		Aug 2016
1.1.1) 57MM GUN ^(†)		2018	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NAVSEA	Mar 2018	Mar 2020	2	8,855K	Y		Aug 2016
2.1.5) ANCILLARY EQUIPMENT		2016	US Army Contracting Command / Picatinny Arsenal, NJ	MIPR	Picatinny, NJ	Aug 2016	Aug 2017	2	522,500.00	Y		Mar 2016
2.1.6) GUN COMPUTER SYSTEM		2017	LOCKHEED MARTIN / MANASSAS, VA	SS / FP	NAVSEA	Mar 2017	Dec 2017	1	1,506K	Y		Jan 2016
2.1.6) GUN COMPUTER SYSTEM		2018	LOCKHEED MARTIN / MANASSAS, VA	SS / FP	NAVSEA	Mar 2018	Dec 2018	3	1,535K	Y		Jan 2016
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC		2015	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Oct 2015	Oct 2016	4	1,185K	Y		Jan 2015
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC		2017 ⁽⁸⁾	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	May 2017	May 2018	6	1,230K	Y		Jan 2016
3.1.1) MACHINE GUN SYSTEM EQUIPMENT FRC		2018	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Mar 2018	Mar 2019	6	1,254K	Y		Jan 2016
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC		2017	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Mar 2017	Mar 2018	1	1,230K	Y		Nov 2015
3.1.2) MACHINE GUN SYSTEM EQUIPMENT OPC		2018	BAE SYSTEMS / MINNEAPOLIS, MN	SS / FP	NSWC IHD	Mar 2018	Mar 2019	1	1,254K	Y		Nov 2015

^(†) indicates the presence of a P-21

Footnotes:

⁽⁷⁾ FY 2017 MK110 contract award delay attributed to administrative delays processing the acquisition plan.

⁽⁸⁾ FY 2017 Machine Gun System (MK38) award date slip attributed to unanticipated administrative delays releasing the RFP.

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2										P-1 Line Item Number / Title: 4206 / Coast Guard Weapons										Item Number / Title [DODIC]: 1 / Coast Guard Weapons														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2014										Fiscal Year 2015														BALANCE			
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014										Calendar Year 2015																	
							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) 57MM GUN ⁽¹⁾																																		
Prior Years Deliveries: 2																																		
	1	2013	NAVY	1	0	1											A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	1	2015	NAVY	1	0	1																											1	
	1	2016	NAVY	1	0	1																											1	
	1	2017	NAVY	1	0	1																											1	
	1	2018	NAVY	2	0	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				

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Exhibit P-21, Production Schedule: FY 2018 Navy																			Date: May 2017																			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2										P-1 Line Item Number / Title: 4206 / Coast Guard Weapons																			Item Number / Title [DODIC]: 1 / Coast Guard Weapons									
Cost Elements (Units in Each)							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) 57MM GUN ⁽¹⁾																																						
Prior Years Deliveries: 2																																						
	1	2013	NAVY	1	0	1	-	-	-	-	-	-	-	-	-	-	-	1															0					
	1	2015	NAVY	1	0	1	A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							
	1	2016	NAVY	1	0	1			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							
	1	2017	NAVY	1	0	1																	A -	-	-	-	-	1										
	1	2018	NAVY	2	0	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								

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017														
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2										P-1 Line Item Number / Title: 4206 / Coast Guard Weapons										Item Number / Title [DODIC]: 1 / Coast Guard Weapons														
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2018										Fiscal Year 2019										BALANCE							
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018										Calendar Year 2019																	
							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) 57MM GUN ⁽¹⁾																																		
Prior Years Deliveries: 2																																		
	1	2013	NAVY		1	0																											0	
	1	2015	NAVY		1	0	1																											0
	1	2016	NAVY		1	0	1	-	-	1																							0	
	1	2017	NAVY		1	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1						0				
	1	2018	NAVY		2	0	2					A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	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				

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Exhibit P-21, Production Schedule: FY 2018 Navy																				Date: May 2017													
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2										P-1 Line Item Number / Title: 4206 / Coast Guard Weapons										Item Number / Title [DODIC]: 1 / Coast Guard Weapons													
Cost Elements <i>(Units in Each)</i>							Fiscal Year 2020										Fiscal Year 2021														BALANCE		
OCO	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021																
							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) 57MM GUN ⁽¹⁾																																	
Prior Years Deliveries: 2																																	
	1	2013	NAVY		1	1	0																										0
	1	2015	NAVY		1	1	0																										0
	1	2016	NAVY		1	1	0																										0
	1	2017	NAVY		1	1	0																										0
	1	2018	NAVY		2	0	2	-	-	-	-	-	1	1	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	0						

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Exhibit P-21, Production Schedule: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2					P-1 Line Item Number / Title: 4206 / Coast Guard Weapons				Item Number / Title [DODIC]: 1 / Coast Guard Weapons			
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2018	1-8-5 For 2018	MAX For 2018	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	BAE SYSTEMS - MINNEAPOLIS, MN	1	2	4	9	3	30	33	3	3	24	27

"A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand).If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts							P-1 Line Item Number / Title: 4217 / Gun Mount Mods					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	579.605	58.130	77.003	76.025	0.000	76.025	76.434	75.745	76.444	77.129	14.098	1,110.613
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	579.605	58.130	77.003	76.025	0.000	76.025	76.434	75.745	76.444	77.129	14.098	1,110.613
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	579.605	58.130	77.003	76.025	0.000	76.025	76.434	75.745	76.444	77.129	14.098	1,110.613
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	-	3.190	1.795	3.320	-	3.320	1.031	1.118	3.489	3.832	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:
Gun Mount Mods supports various types of Gun Weapon Systems, sub-system modifications and upgrade requirements.

[P5 / E5001 MK45 MODS 1&2]: Funding was realigned to E5011.

[P5 / E5002 MEDIUM CALIBER GUN MODS]: Medium Caliber Gun Mounts (MK110 57mm or MK75 76mm) are installed on LCS, USCG WMSL, and USCG WMEC cutters and land based training/test units. The gun mounts provide an anti-surface warfare and anti-air warfare capability for outfitted ships. Funds procure Ordnance Alterations (ORDALT kits), and provide ILS support and production engineering for system improvements that affect safety, reliability and maintainability.

[P5 / E5004 MK45 MOD 4]: Funding was realigned to E5011.

[P5 / E5006 MINOR CALIBER GUN MODS]: Minor Caliber Gun Mounts (MK38 MOD or MK46 MOD) are installed on AS, CVN, CG, DDG, LCS, LSD, LPD, LHA, LHD, FFG, PC, USCG FRC, USCG OPC, LCC, MK VI Patrol Boats and land based training/test units. The gun mounts provide an anti-surface warfare and anti-air warfare capability for outfitted ships. Funds procure ORDALTs kits, and provide ILS support and production engineering for system improvements that affect safety, reliability and maintainability.

[P5 / E5011 MAJOR CALIBER GUN MODS]: The 5-Inch MK45 MOD Gun Mounts are automated, lightweight, single-barrel gun mounts that provide an anti-surface warfare, anti-air warfare, and naval surface fire support capability for outfitted ships. The MK45 is installed on CG47 and DDG51 Class surface ships and land based training/test units. Funds procure ORDALTs kits, and provide ILS support and production engineering for system improvements that affect safety, reliability and maintainability.

[P3A / MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard]: Installations for large deck include CVN installations. CVN installation costs are much higher than the amphibious ships previously executed (longer cable runs, larger sponsons, and floating crane requirements). FY 2018 large deck installations planned for CVN77.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts						P-1 Line Item Number / Title: 4217 / Gun Mount Mods				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Gun Mount Mods				- / 243.634	- / 17.076	- / 23.727	- / 30.873	- / 0.000	- / 30.873
P-3a	1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS (TBD)				- / 335.971	- / 41.054	- / 53.276	- / 45.152	- / 0.000	- / 45.152
P-40	Total Gross/Weapon System Cost				- / 579.605	- / 58.130	- / 77.003	- / 76.025	- / 0.000	- / 76.025
*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: MK38 Machine Gun System kits in FY 2018 will continue procurement of MK38 MOD 3 configuration with multiple capability upgrades: 7.62mm coaxially mounted machine gun, improved Electro-Optical Infrared Sensor (EOIR) for target identification, and improved main computer unit. These capabilities will improve ship-based solutions for close range Fast Attack Craft/Fast In-shore Attack Craft (FAC/FIAC) Counter-Swarm. Installations for large deck include CVN installations. CVN installation costs are much higher than the amphibious ships previously executed (longer cable runs, larger sponsons, and floating crane requirements). FY 2018 large deck installations planned for CVN77.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4217 / Gun Mount Mods						Item Number / Title [DODIC]: 1 / Gun Mount Mods						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total				
Procurement Quantity <i>(Units in Each)</i>				-		-		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				243.634		17.076		23.727		30.873		0.000		30.873				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				243.634		17.076		23.727		30.873		0.000		30.873				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Total Obligation Authority <i>(\$ in Millions)</i>				243.634		17.076		23.727		30.873		0.000		30.873				
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																		
Initial Spares <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>				-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - E5001 MK45 MODS 1&2 Cost																		
Non Recurring Cost																		
1.1.1) MK45 MODS 1&2 KITS	-	-	16.708	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	16.708	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - E5001 MK45 MODS 1&2 Cost	-	-	16.708	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - E5002 MEDIUM CALIBER GUN MODS Cost																		
Recurring Cost																		
2.1.1) MEDIUM CALIBER KITS	-	-	8.933	-	-	1.491	-	-	1.563	-	-	1.745	-	-	0.000	-	-	1.745
2.1.2) MEDIUM CALIBER GUN SCHOOL HOUSE	-	-	12.875	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	21.808	-	-	1.491	-	-	1.563	-	-	1.745	-	-	0.000	-	-	1.745
Subtotal: Hardware - E5002 MEDIUM CALIBER GUN MODS Cost	-	-	21.808	-	-	1.491	-	-	1.563	-	-	1.745	-	-	0.000	-	-	1.745
Hardware - E5004 MK45 MOD 4 Cost																		
Non Recurring Cost																		
3.1.1) DDG MODERNIZATION WEAPONS	-	-	8.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
3.1.2) MK45 MOD 4 KITS	-	-	55.912	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2							P-1 Line Item Number / Title: 4217 / Gun Mount Mods						Item Number / Title [DODIC]: 1 / Gun Mount Mods					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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)
3.1.3) MK45 MOD 4 KITS-INSTALL / ILS / PRODUCTION	-	-	4.203	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	68.115	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - E5004 MK45 MOD 4 Cost	-	-	68.115	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - E5006 MINOR CALIBER GUN MODS Cost																		
Recurring Cost																		
4.1.1) MK38 GUN ENGINEERING CHANGE ORDERS	-	-	11.928	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.2) SPS DE-INSTALLATION	-	-	0.000	-	-	1.416	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.3) MK38 GUN KITS ILS / TEST / PRODUCTION SUPT (Surface Warfare)	-	-	26.245	-	-	1.301	-	-	1.520	-	-	1.784	-	-	0.000	-	-	1.784
4.1.4) MK38 GUN KITS ILS / TEST / PRODUCTION SUPT (Expeditionary Warfare)	-	-	1.070	-	-	0.368	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.6) MK38 COAXIAL GUN UPGRADE	-	-	5.034	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
4.1.7) MK38 UPGRADE KITS	-	-	7.051	-	-	2.161	-	-	5.722	-	-	10.798	-	-	0.000	-	-	10.798
4.1.8) MK38 UPGRADE KIT INSTALL	-	-	0.300	-	-	0.600	-	-	1.600	-	-	2.000	-	-	0.000	-	-	2.000
4.1.9) MK38 UPGRADE LOGISTICS SUPT	-	-	6.177	-	-	1.244	-	-	1.380	-	-	1.539	-	-	0.000	-	-	1.539
4.1.10) MK46 GWS KITS	-	-	5.317	-	-	1.078	-	-	3.419	-	-	3.744	-	-	0.000	-	-	3.744
4.1.11) MK46 GWS KIT INSTALL	-	-	0.556	-	-	0.364	-	-	0.424	-	-	0.486	-	-	0.000	-	-	0.486
4.1.12) MK46 GUN SCHOOL HOUSE	-	-	8.893	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Recurring Cost	-	-	72.571	-	-	8.532	-	-	14.065	-	-	20.351	-	-	0.000	-	-	20.351
Subtotal: Hardware - E5006 MINOR CALIBER GUN MODS Cost	-	-	72.571	-	-	8.532	-	-	14.065	-	-	20.351	-	-	0.000	-	-	20.351

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Exhibit P-5, Cost Analysis: FY 2018 Navy												Date: May 2017						
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4217 / Gun Mount Mods						Item Number / Title [DODIC]: 1 / Gun Mount Mods						
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - E5007 FORCE PROTECTION WEAPONS (ATFP) Cost																		
Non Recurring Cost																		
5.1.1) FORCE PROTECTION WEAPONS (ATFP)	-	-	5.308	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	5.308	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - E5007 FORCE PROTECTION WEAPONS (ATFP) Cost	-	-	5.308	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - E5008 STABILIZED MK38 MOD 2 GUNS - ESVS Cost																		
Non Recurring Cost																		
6.1.1) STABILIZED MK38 MOD 2 GUNS - ESVS	-	-	10.438	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	10.438	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - E5008 STABILIZED MK38 MOD 2 GUNS - ESVS Cost	-	-	10.438	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - E5009 TRANSIT PROTECTION SYSTEMS Cost																		
Non Recurring Cost																		
7.1.1) PALLETIZED PROTECTION SYSTEMS	-	-	1.100	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
7.1.2) PRE-PRODUCTION COSTS	-	-	1.691	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	2.791	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - E5009 TRANSIT PROTECTION SYSTEMS Cost	-	-	2.791	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Hardware - MK110 (57MM) NAVAL GUN Cost																		
Non Recurring Cost																		
8.1.1) LAND BASED ENGINEERING SITE	-	-	7.800	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Non Recurring Cost	-	-	7.800	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000
Subtotal: Hardware - MK110 (57MM) NAVAL GUN Cost	-	-	7.800	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000

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Exhibit P-5, Cost Analysis: FY 2018 Navy													Date: May 2017					
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2							P-1 Line Item Number / Title: 4217 / Gun Mount Mods						Item Number / Title [DODIC]: 1 / Gun Mount Mods					
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 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 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 - E5011 MAJOR CALIBER GUN MODS Cost																		
Recurring Cost																		
9.1.1) MK45 MOD 1, 2 & 4 KITS	-	-	24.733	-	-	4.242	-	-	5.407	-	-	5.853	-	-	0.000	-	-	5.853
9.1.2) MK45 MOD 1 , 2 & 4 INSTALL / ILS / PROD SUPT	-	-	13.362	-	-	2.811	-	-	2.692	-	-	2.924	-	-	0.000	-	-	2.924
Subtotal: Recurring Cost	-	-	38.095	-	-	7.053	-	-	8.099	-	-	8.777	-	-	0.000	-	-	8.777
Subtotal: Hardware - E5011 MAJOR CALIBER GUN MODS Cost	-	-	38.095	-	-	7.053	-	-	8.099	-	-	8.777	-	-	0.000	-	-	8.777
Gross/Weapon System Cost	-	-	243.634	-	-	17.076	-	-	23.727	-	-	30.873	-	-	0.000	-	-	30.873

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Exhibit P-3a, Individual Modification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2		P-1 Line Item Number / Title: 4217 / Gun Mount Mods			Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	335.971	41.054	53.276	45.152	0.000	45.152
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	335.971	41.054	53.276	45.152	0.000	45.152
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	335.971	41.054	53.276	45.152	0.000	45.152
<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: MK38 Machine Gun System kits in FY 2018 will continue procurement of MK38 MOD 3 configuration with multiple capability upgrades: 7.62mm coaxially mounted machine gun, improved Electro-Optical Infrared Sensor (EOIR) for target identification, and improved main computer unit. These capabilities will improve ship-based solutions for close range Fast Attack Craft/Fast In-shore Attack Craft (FAC/FIAC) Counter-Swarm. [MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard] Installations for large deck include CVN installations. CVN installation costs are much higher than the amphibious ships previously executed (longer cable runs, larger sponsons, and floating crane requirements). FY 2018 large deck installations planned for CVN77.						

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Exhibit P-3a, Individual Modification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2		P-1 Line Item Number / Title: 4217 / Gun Mount Mods			Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: [No Model Specified]		Modification Type: TBD			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS						
B Kits						
Recurring						
1.1.1) MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard - NonOrganic ⁽¹⁾	231 / 176.082	10 / 13.870	22 / 31.130	13 / 18.759	- / -	13 / 18.759
1.1.2) MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Large Deck - NonOrganic ⁽²⁾	28 / 34.125	4 / 5.548	4 / 5.660	4 / 5.772	- / -	4 / 5.772
1.1.3) MINOR CAL. GUN MODS MK38 GUN KITS (Expeditionary Warfare) - NonOrganic	8 / 9.192	2 / 2.774	- / -	- / -	- / -	- / -
Subtotal: Recurring	- / 219.399	- / 22.192	- / 36.790	- / 24.531	- / -	- / 24.531
Subtotal: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS	267 / 219.399	16 / 22.192	26 / 36.790	17 / 24.531	- / -	17 / 24.531
Subtotal: Procurement, All Modification Items	- / 219.399	- / 22.192	- / 36.790	- / 24.531	- / -	- / 24.531
Installation						
Modification Item 1 of 1: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS	- / 116.572	- / 18.862	- / 16.486	- / 20.621	- / 0.000	- / 20.621
Subtotal: Installation	- / 116.572	- / 18.862	- / 16.486	- / 20.621	- / -	- / 20.621
Total						
Total Cost (Procurement + Support + Installation)	335.971	41.054	53.276	45.152	0.000	45.152

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Exhibit P-3a, Individual Modification: FY 2018 Navy						Date: May 2017							
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2				P-1 Line Item Number / Title: 4217 / Gun Mount Mods				Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS					
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:							
Modification Item 1 of 1: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS													
Manufacturer Information													
Manufacturer Name: BAE SYSTEMS						Manufacturer Location: Minneapolis, MN							
Administrative Leadtime (in Months): 6						Production Leadtime (in Months): 12							
Dates		FY 2016		FY 2017		FY 2018							
Contract Dates		Sep 2016		May 2017		May 2018							
Delivery Dates		Sep 2017		May 2018		May 2019							
Installation Information													
Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Standard													
Installation Cost		Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)	
Prior Years		218 / 97.599		14 / 9.044		- / -		- / -		- / -		- / -	
FY 2016		- / -		- / -		16 / 10.528		- / -		- / -		- / -	
FY 2017		- / -		- / -		- / -		22 / 14.784		0 / 0.000		22 / 14.784	
FY 2018		- / -		- / -		- / -		- / -		- / -		- / -	
Total		218 / 97.599		14 / 9.044		16 / 10.528		22 / 14.784		0 / 0.000		22 / 14.784	
Installation Schedule													
	PYS	FY 2016				FY 2017				FY 2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	218	-	4	5	5	-	5	5	6	-	5	8	9
Out	217	1	-	4	5	5	-	5	5	6	-	8	5
Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Large Deck													
Installation Cost		Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)		Qty (Each) / Total Cost (\$ M)	
Prior Years		14 / 14.427		7 / 9.818		- / -		- / -		- / -		- / -	
FY 2016		- / -		- / -		4 / 5.722		- / -		- / -		- / -	
FY 2017		- / -		- / -		- / -		4 / 5.837		0 / 0.000		4 / 5.837	
FY 2018		- / -		- / -		- / -		- / -		- / -		- / -	
Total		14 / 14.427		7 / 9.818		4 / 5.722		4 / 5.837		0 / 0.000		4 / 5.837	

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Exhibit P-3a, Individual Modification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2	P-1 Line Item Number / Title: 4217 / Gun Mount Mods	Modification Number / Title: 1 / E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

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

Modification Item 1 of 1: E5006 MINOR CALIBER GUN MODS MK38 GUN KITS

Installation Information

Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MK38 GUN KITS (Surface Warfare) Large Deck

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	14	-	-	4	3	-	-	2	2	-	2	2	-
Out	11	3	-	-	4	3	-	-	2	2	-	2	2

Method of Implementation: [none specified]:: Installation Name: MINOR CAL. GUN MODS MK38 GUN KITS (Expeditionary Warfare)

Installation Cost	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total 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 / 4.546	- / -	- / -	- / -	- / -	- / -
FY 2016	- / -	- / -	2 / 0.236	- / -	- / -	- / -
FY 2017	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 4.546	- / -	2 / 0.236	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2016				FY 2017				FY 2018			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	8	-	-	-	-	-	-	2	-	-	-	-	-
Out	8	-	-	-	-	-	-	-	2	-	-	-	-

Footnotes:

- (1) MK38 Machine Gun System kits in FY 2018 will continue procurement of MK38 MOD 3 configuration with multiple capability upgrades: 7.62mm coaxially mounted machine gun, improved Electro-Optical Infrared Sensor (EOIR) for target identification, and improved main computer unit. These capabilities will improve ship-based solutions for close range Fast Attack Craft/Fast In-shore Attack Craft (FAC/FIAC) Counter-Swarm. Installations for large deck include CVN installations. CVN installation costs are much higher than the amphibious ships previously executed (longer cable runs, larger sponsons, and floating crane requirements). FY 2018 large deck installations planned for CVN77.
- (2) Installations for large deck include CVN installations. CVN installation costs are much higher than the amphibious ships previously executed (longer cable runs, larger sponsons, and floating crane requirements). FY 2018 large deck installations planned for CVN77.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy									Date: May 2017			
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts							P-1 Line Item Number / Title: 4221 / LCS Module Weapons					
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A					Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	24	110	-	110	110	110	110	110	-	574
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	2.776	13.110	0.000	13.110	13.628	13.424	13.701	13.977	61.563	132.179
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	2.776	13.110	0.000	13.110	13.628	13.424	13.701	13.977	61.563	132.179
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	2.776	13.110	0.000	13.110	13.628	13.424	13.701	13.977	61.563	132.179
(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>)	-	-	115,666.67	119,181.82	-	119,181.82	123,890.91	122,036.36	124,554.55	127,063.64	-	230,277.00
Description: 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, and 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. SUW (Phase 3) adds the MQ-8C 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. The Surface-to-Surface Missile modules (SSMM) are composed of a surface-to-surface missile system, mission module controller firmware, and SSMM software. The surface-to-surface missile system includes a missile exhaust containment structure (MECS), a M299 Launcher, and Hellfire Longbow missiles. This budget line procures the Hellfire Longbow missiles. Other Related Budgets: BLIs: OPN 1603, RDT&E 0603596N [P5 / Longbow Hellfire Missile]: The Hellfire Longbow missile is a fire and forget, millimeter-wave seeker missile for autonomous engagement. It has a 12.39 lb warhead, a single stage motor and a 6-8 km range when vertically launched. [P5 / Consulting Services]: Provides program management support, engineering and technical support, studies, analysis and evaluation on mission module systems.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts							P-1 Line Item Number / Title: 4223 / Cruiser Modernization Weapons					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	263.060	33.600	0.000	34.825	0.000	34.825	0.000	0.000	0.000	0.000	-	331.485
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	263.060	33.600	0.000	34.825	0.000	34.825	0.000	0.000	0.000	0.000	-	331.485
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	263.060	33.600	0.000	34.825	0.000	34.825	0.000	0.000	0.000	0.000	-	331.485
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Dollars)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Description: Modernized CG47 Class Ships operate independently, or as units of Carrier Strike Groups, and Surface Action Groups, in support of underway replenishment groups and Marine Amphibious Task Forces in multitreat environments that include air, surface, and subsurface threats. These ships respond to low intensity conflict/Coastal and Littoral Offshore Warfare scenarios, joint missions, as well as open ocean conflicts, providing and augmenting power projection and forward presence. In addition, these ships conduct air dominance, land attack, and force protection missions. The Cruiser Modernization warfighting improvements extend the CG47 Class Ships capabilities against projected threats well into the 21st century.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts						P-1 Line Item Number / Title: 4223 / Cruiser Modernization Weapons				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / Cruiser Modernization Weapons [CC002]	P-5a			- / 263.060	- / 33.600	- / 0.000	- / 34.825	- / 0.000	- / 34.825
P-40	Total Gross/Weapon System Cost				- / 263.060	- / 33.600	- / 0.000	- / 34.825	- / 0.000	- / 34.825
*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: FY 2016 and FY 2018 funding supports procurement of 5 inch 62 caliber MK-45 Mod 4 gun weapon systems in support of Cruiser Modernization.										

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Exhibit P-5, Cost Analysis: FY 2018 Navy										Date: May 2017									
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2						P-1 Line Item Number / Title: 4223 / Cruiser Modernization Weapons						Item Number / Title [DODIC]: 1 / Cruiser Modernization Weapons [CC002]							
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total					
Procurement Quantity (Units in Each)				-		-		-		-		-		-					
Gross/Weapon System Cost (\$ in Millions)				263.060		33.600		0.000		34.825		0.000		34.825					
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
Net Procurement (P-1) (\$ in Millions)				263.060		33.600		0.000		34.825		0.000		34.825					
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
Total Obligation Authority (\$ in Millions)				263.060		33.600		0.000		34.825		0.000		34.825					
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)																			
Initial Spares (\$ in Millions)				-		-		-		-		-		-					
Gross/Weapon System Unit Cost (\$ in Dollars)				-		-		-		-		-		-					
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																			
Cost Elements	Prior Years			FY 2016			FY 2017			FY 2018 Base			FY 2018 OCO			FY 2018 Total			
	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	
Flyaway Cost																			
Recurring Cost																			
1.1.1) MK 45 GUN MOUNTS ^(†) (1)	14,513K	17	246.721	15,084K	2	30.167	-	-	-	15,634K	2	31.267	-	-	-	15,634K	2	31.267	
1.1.2) ENGINEERING SERVICES	-	-	16.339	-	-	3.433	-	-	-	-	-	3.558	-	-	-	-	-	3.558	
Subtotal: Recurring Cost	-	-	263.060	-	-	33.600	-	-	-	-	-	34.825	-	-	-	-	-	34.825	
Subtotal: Flyaway Cost	-	-	263.060	-	-	33.600	-	-	-	-	-	34.825	-	-	-	-	-	34.825	
Gross/Weapon System Cost	-	-	263.060	-	-	33.600	-	-	0.000	-	-	34.825	-	-	0.000	-	-	34.825	
^(†) indicates the presence of a P-5a 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 \$38,800,000 FY 2015 SMOSF for procurement of 5 inch 62 caliber MK45 Mod 2 gun weapon systems in support of Cruiser Modernization. FY 2018 funds CG Modernization.																			

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Exhibit P-5a, Procurement History and Planning: FY 2018 Navy								Date: May 2017				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 04 / 2			P-1 Line Item Number / Title: 4223 / Cruiser Modernization Weapons					Item Number / Title [DODIC]: 1 / Cruiser Modernization Weapons [CC002]				
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) MK 45 GUN MOUNTS		2011	BAE / Louisville, KY	SS / CPFF	NSWC INDIAN HEAD	Aug 2011	Dec 2012	3	15,934K	Y		Jul 2010
1.1.1) MK 45 GUN MOUNTS		2012	BAE / Louisville, KY	SS / CPFF	NSWC INDIAN HEAD	Jun 2012	Dec 2013	3	15,188K	Y		Jul 2011
1.1.1) MK 45 GUN MOUNTS		2015	BAE / Louisville, KY	SS / CPFF	NSWC INDIAN HEAD	Aug 2015	Dec 2016	2	17,684K	Y		Jul 2015
1.1.1) MK 45 GUN MOUNTS		2016	BAE / Louisville, KY	SS / CPFF	NSWC INDIAN HEAD	Aug 2016	Dec 2017	2	15,084K	Y		Jul 2016
1.1.1) MK 45 GUN MOUNTS		2018	BAE / Louisville, KY	SS / CPFF	NSWC INDIAN HEAD	Jun 2018	Dec 2019	2	15,634K	Y		May 2018

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy										Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 04: Other Weapons / BSA 2: Modification of Guns And Gun Mounts							P-1 Line Item Number / Title: 4225 / Airborne Mine Neutralization Systems					
ID Code (A=Service Ready, B=Not Service Ready): A				Program Elements for Code B Items: N/A				Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A												
Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	112.742	7.766	15.753	16.925	0.000	16.925	17.725	12.247	12.500	12.751	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	112.742	7.766	15.753	16.925	0.000	16.925	17.725	12.247	12.500	12.751	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	112.742	7.766	15.753	16.925	0.000	16.925	17.725	12.247	12.500	12.751	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>)	-	0.049	0.007	3.100	-	3.100	0.164	0.536	0.572	0.801	Continuing	Continuing
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Description: Airborne Mine Countermeasures (AMCM) Equipment is currently used by MH-53E helicopters to counter the threat of sea mines. The MH-60S helicopter will be adapted for the AMCM mission in support of the development of an Organic Fleet AMCM program. The equipment is divided into three categories -- minesweeping, minehunting, and mine neutralization. (1) Minesweeping is performed by mechanical or influence sweeps. In mechanical sweeping, the mine mooring is severed by the sweep gear allowing the mine to float to the surface where it is destroyed. In influence sweeping, a magnetic or acoustic field, which simulates the magnetic/acoustic signature of a ship, is introduced into the water. This field causes the mine mechanism to actuate. (2) In mine hunting, the objective is to locate, identify, and classify mine like objects (usually by means of high resolution sonar). (3) Finally, in mine neutralization, previously identified/classified mine like objects are reacquired and neutralized using explosive devices. [P5 / ARCHERFISH Neutralizer]: AN/ASQ-235 - Airborne Mine Neutralization System (AMNS) AMNS will provide the MH-60S helicopter with the capability to neutralize bottom and moored mines using an expendable mine neutralization device. The AMNS was tested on the MH-53E helicopter to prove the neutralization effectiveness. The system will be deployed from the MH-60S helicopter as part of the Littoral Combat Ship (LCS) Mine Countermeasure (MCM) Mission Package. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA). AMNS procurements are funded with OPN for the AMNS combat system and WPN for the AMNS Archerfish neutralizer. [P5 - 2 / SEAFOX Neutralizer]: SEAFOX neutralizers are used from the AN/ASQ-232, Airborne Mine Neutralization System - SEAFOX (AMNS-SF), the AN/SLQ-60, Surface Mine Neutralization System - SEAFOX (SMNS-SF), and the SEAFOX Portable Mine Neutralization System (PMNS). Airborne combat systems are deployed from the MH-53E SEA DRAGON helicopters. Surface combat systems are deployed from the MCM-1 Avenger Class ships. The portable (PMNS) combat system is deployed from a Rigid Hull Inflatable Boat (RHIB). Justification: FY 2018 funding supports the baseline program to procure the neutralization capability for our current in service mission (SEAFOX - MH-53E helicopters and MCM Class Ships). FY 2018 also procures the neutralization capability for our organic mission (Archerfish MH-60S and LCS). This capability is currently deployed around the world to meet the current operational mine warfare mission demand for these systems.												

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy	Date: May 2017

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts	P-1 Line Item Number / Title: 6120 / Spares and Repair Parts

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	150.055	62.383	110.255	0.000	110.255	122.664	143.089	137.733	152.674	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	150.055	62.383	110.255	0.000	110.255	122.664	143.089	137.733	152.674	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	150.055	62.383	110.255	0.000	110.255	122.664	143.089	137.733	152.674	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:

This budget activity provides all WPN Spares funding, formerly separately identified in the other WPN budget activities. The procurement of spares, repair parts, and assemblies for WPN equipment requiring support by the acquisition activities, prior to the Navy Supply System Material Support Date, is outlined below for Initial and Vendor Direct spares.

Spares funding is required for the initial outfitting and repair of missiles or components that fail or are damaged while in the Fleet and for expendable items, such as guided missiles and non-recoverable target drones. For recoverable target drones, additional spares and repair parts are required to repair damage incurred while in flight, damage incurred during recovery operations, and for control and telemetry equipment.

Funding also provides for Initial and Vendor Direct spares, during the maintenance cycle, to support Anti-Submarine Warfare weapons and support equipment. Funding also provides for Initial and Vendor Direct spares in support of Navy surface ordnance, which consists of all guns, associated equipment (hoists, shields, etc.), and related material support.

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy								Date: May 2017		
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts						P-1 Line Item Number / Title: 6120 / Spares and Repair Parts				
ID Code (A=Service Ready, B=Not Service Ready): A			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										
Exhibits Schedule					Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-18	WPN spares				- / -	- / 150.055	- / 62.383	- / 110.255	- / -	- / 110.255
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 150.055	- / 62.383	- / 110.255	- / 0.000	- / 110.255
Title represents the P-18 Title for Spares.										
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.										
Justification: Increase funding in AMRAAM initial spares to procure additional spares that are required to support assets that are now out of warranty and require additional spares to extend operational life. Increase funding in Sidewinder initial spares to reduce a significant backlog of depot repairs. Funding will support the new Block II and Block II+ variants of the AIM-9X(Sidewinder) missile and the new Guam intermediate depot. Increase funding in Aerial Targets initial to support the BQM-34s and BQM-74E programs which have increased production. The delay of new target deployment has increased the spare requirements for legacy targets. These subsonic aerial targets simulate sea skimming and mid altitude anti-ship cruise missile. The production rate for the GQM-163A has tripled to support the supersonic, sea skimming, and anti-ship cruise missile test/evaluation and training. These three programs need additional spare parts to support the increased number of required assets. Increase in ASW Targets to decrease the backlog and providing assets to keep pace with operational requirements. Increase funding in MK-54 Initial Program contains MK54 Mod 0, MK54 Mod 1, Cold Gas Fes, and HAWWC projects. The increase is due to changes in unit prices based on contract proposal for the Mod 0, decrease the backlog, and keeping pace with operational requirements. Increase in MK-48 Torpedo ADCAP Mods funding to support procurement of AB/TC components which were previously supplied as GFE. Increase funding in Gun Mount Mods spares to support MK-46 (GWS), MK-38 (MOD2 MG), MK-45, and MK75/76 MM and fielding more assets to keep pace with operational requirements. Tomahawk spares procurements in FY2015, FY2016 and FY2017 are critical to support both the FY 2016 - FY 2018 Tomahawk depot and preserve the schedule of the TACTOM recertification start up in FY 2019. Increase funding in Standard Missile spares to support recertifications and increase levels of Section Level spares available to support missile maintenance. Starting with the first recertification activity in FY 2017, the program will start losing fleet rounds upon section failures. These spares on hand are critical to avoiding a 12 month repair. Repairing of sections is done on the same factory line as new production. Increase funding in ESSM spares to support the Intermediate Level Maintenance Facility (ILMF) recertification of the missiles until 2030 which includes guidance sections, transition sections, control sections, Target Detection Device (TDD) units, and Power Supply Assembly (PSA) units before the missile can be returned to the Fleet. Increase funding in 6T COG to support QUICKSTRIKE Mines MK 62, 63, 65, SLMM MK 67; VEMS/MCM Targets (Versatile Exercise Mines MK 74, 75, Mines Countermeasures Targets MK 44, 45, 46, 47, 48, 50, 51, 52, 53 & 57), Mines Sweeping Equipment, (AN/SLQ-48; Mission Packages I, II, III & Umbilical Cables), and AMNS systems.										

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Exhibit P-40, Budget Line Item Justification: FY 2018 Navy		Date: May 2017
Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 06: Spares and Repair Parts / BSA 1: Spares And Repair Parts		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts
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 Increase funding in Spares for NAVAIR will decrease backlogged repair pipeline as well as fielding more assets to keep pace with operational requirements. These funds will also enable platforms to avoid depot interruptions and potential startup costs.		

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Exhibit P-18, Initial and Replenishment Spare and Repair Parts Justification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 06 / 1		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts			Title: WPN spares	
End Item Line Item Number / Name [MDAP/MAIS]	Prior Years (\$ M)	FY 2016 (\$ M)	FY 2017 (\$ M)	FY 2018 Base (\$ M)	FY 2018 OCO (\$ M)	FY 2018 Total (\$ M)
Initial						
BA 02 - Other Missiles						
2206 / AMRAAM	-	1.644	1.093	3.371	-	3.371
2209 / Sidewinder	-	1.884	0.138	3.208	-	3.208
2280 / Aerial Targets	-	0.335	1.316	6.051	-	6.051
2290 / Other Missile Support	-	0.579	0.309	1.112	-	1.112
BA 03 - Torpedoes and Related Equipment						
3215 / MK-54 Torpedo Mods	-	15.524	4.714	16.606	-	16.606
3225 / MK-48 Torpedo ADCAP Mods	-	0.402	0.365	3.143	-	3.143
3301 / Torpedo Support Equipment	-	0.894	0.489	1.147	-	1.147
BA 04 - Other Weapons						
4206 / Coast Guard Weapons	-	0.376	0.228	0.810	-	0.810
4217 / Gun Mount Mods	-	3.190	1.795	3.320	-	3.320
4225 / Airborne Mine Neutralization Systems	-	0.049	0.007	3.100	-	3.100
Subtotal: Initial	-	24.877	10.454	41.868	-	41.868
Replenishment						
BA 02 - Other Missiles						
2101 / Tomahawk	-	70.347	39.815	13.518	-	13.518
2234 / Standard Missile	-	17.094	4.944	15.062	-	15.062
2242 / Rolling Airframe Missile (RAM)	-	-	0.235	2.201	-	2.201
2307 / Evolved Sea Sparrow Missile (ESSM)	-	10.102	1.717	11.740	-	11.740
9203 / Spares for NAVAIR	-	10.261	2.794	8.558	-	8.558
BA 03 - Torpedoes and Related Equipment						
3141 / ASW Targets	-	1.831	0.760	4.273	-	4.273
3215 / MK-54 Torpedo Mods	-	0.535	0.196	2.224	-	2.224
3225 / MK-48 Torpedo ADCAP Mods	-	0.211	0.100	0.148	-	0.148
3302 / ASW Range Support	-	0.340	0.354	0.658	-	0.658
6231 / 6T COG	-	-	-	1.759	-	1.759
9303 / Spares for 6T COG	-	2.724	-	0.000	-	0.000
BA 04 - Other Weapons						
4205 / Close-In Wpns Sys (CIWS) Mods	-	2.459	0.014	0.164	-	0.164
4206 / Coast Guard Weapons	-	0.126	0.059	0.238	-	0.238

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Exhibit P-18, Initial and Replenishment Spare and Repair Parts Justification: FY 2018 Navy					Date: May 2017	
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 06 / 1		P-1 Line Item Number / Title: 6120 / Spares and Repair Parts			Title: WPN spares	
End Item Line Item Number / Name [MDAP/MAIS]	Prior Years (\$ M)	FY 2016 (\$ M)	FY 2017 (\$ M)	FY 2018 Base (\$ M)	FY 2018 OCO (\$ M)	FY 2018 Total (\$ M)
4217 / Gun Mount Mods	-	7.967	0.939	6.444	-	6.444
4225 / Airborne Mine Neutralization Systems	-	1.181	0.002	1.400	-	1.400
Subtotal: Replenishment	-	125.178	51.929	68.387	-	68.387
Total Cost (Initial + Replenishment)	-	150.055	62.383	110.255	-	110.255

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