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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2292 / LCS OTH Missile
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	8	-	18	18	15	16	26	26	Continuing	Continuing
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	18.156	0.000	38.137	38.137	32.975	33.585	49.371	50.451	Continuing	Continuing
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	18.156	0.000	38.137	38.137	32.975	33.585	49.371	50.451	Continuing	Continuing
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	18.156	0.000	38.137	38.137	32.975	33.585	49.371	50.451	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>)	-	-	2,270K	-	2,119K	2,119K	2,198K	2,099K	1,899K	1,940K	Continuing	Continuing

Description:

FY 2020 funding totals include \$0.0M for Base and \$38.137M for Overseas Contingency Operations (OCO); of which \$38.137M and 18 quantity is realigned as part of the OCO for Base Requirements. FY 2020 OCO for Base Requirements is OCO funding for base budget requirements in support of the National Defense Strategy. The Budget requests these funds in OCO to comply with the base budget defense caps included in the Budget Control Act of 2011.

The Over The Horizon (OTH) missile provides the Littoral Combat Ship/Frigate (LCS/FFG(X)) with long range anti-surface offensive capability against surface combatants.

The OTH Weapon Systems (WS) consists of a Missile Launch System and a complement of missiles.

- Missile Launch System components include: a Launch Mechanism, Operator Interface, and Fire Control System which are procured with Other Procurement, Navy Funds.

- Missile components include a missile encased in a firing canister (encanistered missile). An encanistered missile consists of a flight vehicle that is mechanically and electrically connected within a weapon canister. The flight vehicle's major components are operationally joined, consisting of a warhead (explosive), propulsion system, guidance system, initiation system, and other components. The weapon canister is a mechanical structure with electrical interconnections that is used to support and restrain the flight vehicle during loading and unloading operations. The weapon canister allows the flight vehicle to mechanically and electrically connect to the Missile Launch System without being exposed to the environment.

Other Related Budgets: OPN LI 5231, RDTEN PE 0604756N Proj 2070

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Exhibit P-40, Budget Line Item Justification: PB 2020 Navy **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles **P-1 Line Item Number / Title:**
2292 / LCS OTH 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: N/A

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	1 / LCS OTH Missile	P-5a, P-21			- / 0.000	- / 0.000	8 / 18.156	- / 0.000	18 / 38.137	18 / 38.137
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	8 / 18.156	- / 0.000	18 / 38.137	18 / 38.137

*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:

Over The Horizon Missile base funding is required to support Over The Horizon Weapon System program for the Littoral Combat Ships. The program provides a long range anti-surface offensive capability to improve the ship's ability to defend against enemy surface ships.

FY 2020 funds will be used to procure 18 Over The Horizon missiles encased in a firing canister, an increase from 8 missiles in FY 2019.

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Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / LCS OTH Missile	Item Number / Title [DODIC]: 1 / LCS OTH Missile

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity (Units in Each)	-	-	8	-	18	18
Gross/Weapon System Cost (\$ in Millions)	0.000	0.000	18.156	0.000	38.137	38.137
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	0.000	0.000	18.156	0.000	38.137	38.137
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	0.000	0.000	18.156	0.000	38.137	38.137

(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)	-	-	2,270K	-	2,119K	2,119K

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 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) LCS OTH Missile ^(t)	-	-	-	-	-	-	2,152K	8	17.216	-	-	0.000	1,909K	18	34.369	1,909K	18	34.369
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	17.216	-	-	0.000	-	-	34.369	-	-	34.369
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	17.216	-	-	0.000	-	-	34.369	-	-	34.369
Support Cost																		
2.1) Production Engineering Support - OEM ⁽¹⁾	-	-	-	-	-	-	-	-	0.940	-	-	0.000	-	-	2.150	-	-	2.150
2.2) Engineering Support Government and Contractor ⁽²⁾	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	1.618	-	-	1.618
<i>Subtotal: Support Cost</i>	-	-	-	-	-	-	-	-	0.940	-	-	0.000	-	-	3.768	-	-	3.768
Gross/Weapon System Cost	-	-	0.000	-	-	0.000	2,270K	8	18.156	-	-	0.000	2,119K	18	38.137	2,119K	18	38.137

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

Footnotes:

⁽¹⁾ Funding provides for ongoing Design Agent Services support to the US Navy in support of production line start up, missile test, missile qualification, issue resolution and in an advisory capacity. Production engineering increases from FY 2019 to FY 2020 as the missile assembly and test activities ramp up.

⁽²⁾ Provides program management support, engineering and technical government and contractor support, studies, analysis and evaluation on OTH missile system.

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Exhibit P-5a, Procurement History and Planning: PB 2020 Navy **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / LCS OTH Missile	Item Number / Title [DODIC]: 1 / LCS OTH Missile
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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) LCS OTH Missile ^(†)		2019	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	Dec 2018	Dec 2020	8	2,152K	Y		Feb 2017
1.1.1) LCS OTH Missile ^(†)	✓	2020	Raytheon CO / Tucson AZ	C / FFP	NAVSEA	Dec 2019	Dec 2021	18	1,909K	Y		Feb 2017

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2020 Navy **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / LCS OTH Missile	Item Number / Title [DODIC]: 1 / LCS OTH Missile
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Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019														Fiscal Year 2020														BALANCE
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019														Calendar Year 2020														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
1.1.1) LCS OTH Missile																																			
	1	2019	NAVY	8	0	8			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8					
✓	1	2020	NAVY	18	0	18														A -	-	-	-	-	-	-	-	-	-	18					

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Exhibit P-21, Production Schedule: PB 2020 Navy **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2292 / LCS OTH Missile	Item Number / Title [DODIC]: 1 / LCS OTH Missile
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	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
1.1.1) LCS OTH Missile																															
	1	2019	NAVY	8	0	8	-	-	2	-	-	2	-	-	2	-	-	2											0		
✓	1	2020	NAVY	18	0	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	4	-	-	5	-	-	6	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: PB 2020 Navy								Date: March 2019				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2				P-1 Line Item Number / Title: 2292 / LCS OTH Missile				Item Number / Title [DODIC]: 1 / LCS OTH Missile				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2020	1-8-5 For 2020	MAX For 2020	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			TBD	0	0	24	24	0	0	24	24

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

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to 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).