

**UNCLASSIFIED**

**Exhibit P-40, Budget Line Item Justification:** PB 2016 Navy **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 1: Strategic Missiles	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>Program Elements for Code B Items:</b>	<b>Other Related Program Elements:</b>
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<b>Line Item MDAP/MAIS Code:</b> 289	<b>Item MDAP/MAIS Code(s):</b>
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Resource Summary	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	7,709	206	243	100	-	100	-	-	-	-	-	8,258
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	12,307.264	307.456	317.458	184.814	-	184.814	22.546	39.901	39.405	40.290	590.684	13,849.818
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P1) ( <i>\$ in Millions</i> )	12,307.264	307.456	317.458	184.814	-	184.814	22.546	39.901	39.405	40.290	590.684	13,849.818
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>12,307.264</b>	<b>307.456</b>	<b>317.458</b>	<b>184.814</b>	<b>-</b>	<b>184.814</b>	<b>22.546</b>	<b>39.901</b>	<b>39.405</b>	<b>40.290</b>	<b>590.684</b>	<b>13,849.818</b>

*(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 Thousands</i> )	1,198.280	1,065.748	1,092.000	1,481.860	-	1,481.860	-	-	-	-	-	1,195.280
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 improvements include 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 improvements include rapid mission planning and execution via Global Positioning System (GPS) onboard the launch platform and improved anti-jam GPS.

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:** PB 2016 Navy **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 1: Strategic Missiles	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>Program Elements for Code B Items:</b>	<b>Other Related Program Elements:</b>
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<b>Line Item MDAP/MAIS Code:</b> 289	<b>Item MDAP/MAIS Code(s):</b>
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Exhibits Schedule			Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title*	Exhibits	ID CD	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
1 / Tomahawk	P-5, P-5a, P-21		7,709 / 12,307.264	206 / 307.456	243 / 317.458	100 / 184.814	- / -	100 / 184.814
<b>Total Gross/Weapon System Cost</b>			<b>7,709 / 12,307.264</b>	<b>206 / 307.456</b>	<b>243 / 317.458</b>	<b>100 / 184.814</b>	<b>- / -</b>	<b>100 / 184.814</b>

\*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

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

**Justification:**  
Procurement of new missiles has been suspended beginning in FY17 because inventory will satisfy munition requirements. The industrial base will be maintained to support unplanned maintenance until FY19. TACTOM missiles are scheduled to be returned to the depot starting in FY19 for planned depot maintenance (recertification).  
  
FY16 funding supports TACTOM missile procurement, MK45/CLS production line shutdown, fuel, and production and systems engineering costs support for FRP13 production.

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**Exhibit P-5, Cost Analysis: PB 2016 Navy** **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / O2 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Procurement Quantity (Units in Each)	7,709	206	243	100	-	100
Gross/Weapon System Cost (\$ in Millions)	12,307.264	307.456	317.458	184.814	-	184.814
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P1) (\$ in Millions)	12,307.264	307.456	317.458	184.814	-	184.814
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>12,307.264</b>	<b>307.456</b>	<b>317.458</b>	<b>184.814</b>	<b>-</b>	<b>184.814</b>

*(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)	1,596.480	1,492.505	1,306.412	1,848.140	-	1,848.140

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

Cost Elements	Prior Years			FY 2014			FY 2015			FY 2016 Base			FY 2016 OCO			FY 2016 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)
<b>Flyaway - TOTAL HARDWARE - MISSILE Cost</b>																		
Recurring Cost																		
1.1.1) PREVIOUS TOMAHAWK PRODUCTION	1,335.961	4,200	5,611.035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.2) REMANUFACTURE (BLOCK III)	-	-	592.217	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(1)</sup>	855.976	2,430	2,080.022	1,063.078	142	150.957	1,092.000	243	265.356	1,481.860	100	148.186	-	-	-	1,481.860	100	148.186
1.1.4) TACTICAL TOMAHAWK (CLS) <sup>(1)</sup>	871.321	1,014	883.520	1,071.665	64	68.587	-	-	-	-	-	-	-	-	-	-	-	-
1.1.5) TACTICAL TOMAHAWK (TTL)	1,088.385	65	70.745	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	9,237.539	-	-	219.544	-	-	265.356	-	-	148.186	-	-	-	-	-	148.186
<i>Subtotal: Flyaway - TOTAL HARDWARE - MISSILE Cost</i>	-	-	9,237.539	-	-	219.544	-	-	265.356	-	-	148.186	-	-	-	-	-	148.186

**Hardware - TOTAL HARDWARE - MISSILE - OTHER COSTS Cost**

Recurring Cost																		
2.1.1) CCLS CAPSULE RETRO KIT	-	-	26.300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2016 Navy</b>		<b>Date:</b> February 2015
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / O2 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or add, due to rounding.

Cost Elements	Prior Years			FY 2014			FY 2015			FY 2016 Base			FY 2016 OCO			FY 2016 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 <sup>(1)</sup>	349.456	1,014	354.348	405.546	64	25.955	-	-	-	-	-	-	-	-	-	-	-	-
2.1.3) MK 14 CANISTERS <sup>(1) (2)</sup>	83.422	2,430	202.716	73.303	142	10.409	75.247	243	18.285	84.300	100	8.430	-	-	-	84.300	100	8.430
2.1.4) OBSOLESCENCE*	-	-	25.277	-	-	20.699	-	-	4.441	-	-	-	-	-	-	-	-	-
2.1.6) PRODUCTION LINE SHUTDOWN <sup>(3)</sup>	-	-	-	-	-	-	-	-	-	-	-	7.500	-	-	-	-	-	7.500
<i>Subtotal: Recurring Cost</i>	-	-	608.641	-	-	57.063	-	-	22.726	-	-	15.930	-	-	-	-	-	15.930
<i>Subtotal: Hardware - TOTAL HARDWARE - MISSILE - OTHER COSTS Cost</i>	-	-	608.641	-	-	57.063	-	-	22.726	-	-	15.930	-	-	-	-	-	15.930
<b>Support - TOTAL PROCUREMENT SUPPORT - MISSILE Cost</b>																		
3.1) PRODUCT IMPROVEMENT	-	-	429.419	-	-	4.410	-	-	1.502	-	-	-	-	-	-	-	-	-
3.2) PRODUCTION ENGINEERING SUPPORT <sup>(4)</sup>	-	-	745.144	-	-	10.124	-	-	10.536	-	-	10.016	-	-	-	-	-	10.016
3.3) SPECIAL TOOLING & TEST EQUIPMENT (ST & TE)	-	-	38.090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.4) SYSTEMS ENGINEERING <sup>(5)</sup>	-	-	388.728	-	-	10.307	-	-	10.723	-	-	10.188	-	-	-	-	-	10.188
<i>Subtotal: Support - TOTAL PROCUREMENT SUPPORT - MISSILE Cost</i>	-	-	1,601.381	-	-	24.841	-	-	22.761	-	-	20.204	-	-	-	-	-	20.204
<b>Support - TOTAL FLEET SUPPORT - MISSILE Cost</b>																		
4.1) DOCUMENTATION	-	-	32.257	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.2) SUPPORT EQUIPMENT <sup>(6)</sup>	-	-	170.931	-	-	6.008	-	-	6.615	-	-	0.494	-	-	-	-	-	0.494
4.3) THEATER MISSION PLANNING CENTER	-	-	255.044	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.4) TRAINING EQUIPMENT	-	-	87.953	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.1) EOQ	-	-	50.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5.2) EOQ Credit	-	-	-50.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - TOTAL FLEET SUPPORT - MISSILE Cost</i>	-	-	546.185	-	-	6.008	-	-	6.615	-	-	0.494	-	-	-	-	-	0.494

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<b>Exhibit P-5, Cost Analysis: PB 2016 Navy</b>		<b>Date:</b> February 2015
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / O2 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or add, due to rounding.

Cost Elements	Prior Years			FY 2014			FY 2015			FY 2016 Base			FY 2016 OCO			FY 2016 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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - TOTAL SPARES &amp; REPAIR PARTS Cost</i>	-	-	313.518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	<b>1,596.480</b>	<b>7,709</b>	<b>12,307.264</b>	<b>1,492.505</b>	<b>206</b>	<b>307.456</b>	<b>1,306.412</b>	<b>243</b>	<b>317.458</b>	<b>1,848.140</b>	<b>100</b>	<b>184.814</b>	-	-	-	<b>1,848.140</b>	<b>100</b>	<b>184.814</b>

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

**Footnotes:**

(1) -Total quantity in FY13 includes 15 additional VLS AUR's procured utilizing buy-to-budget authority (procured in FY14). Total quantity in FY14 includes 10 additional VLS AURs utilizing buy-to-budget authority (to be procured in FY15). -A contract awarded Sep 2014 including 196 FY14 funded AUR's (VLS/CLS), 20 Torpedo Tube Launched (TTL) variant AURs as part of the United Kingdom Foreign Military Sales (FMS) case and 15 VLS AUR's (FY13 funded through buy-to budget); total of 231. FY14's unit cost is based on the composite contract cost for 231 VLS AURs across the FY14 and FY15 production contract. -The 10 additional FY14 funded AURs (utilizing buy-to-budget) will be placed on an already negotiated contract option in Jan 2015; total procurement of 206 AUR's (10 plus 196), including the 96 additional quantity in FY15 per the Congressional Add (\$81.7M), to return TACTOM to a minimum sustaining rate production level. The FY15 unit cost estimate is based on the procurement of 206 AUR's (all VLS) utilizing an already negotiated contract option priced through a variation in quantity table. -Additional FY15 funds were received for Overseas Contingency Operations (OCO) supplemental funding (\$45.5M; qty 47) to replenish combat expenditures of Tomahawk missiles used in support of Operation Inherent Resolve. These missiles will be procured with the FY16 production contract due to maximum quantity constraints on the FY15 contract. Therefore, the 47 OCO missiles will not be associated with the rate affect savings associated with the FY15 buy. -The FY16 VLS estimated cost projection of 100 missiles is based on cost estimating methodology used for quantities below the minimum sustaining rate of 196.

(2) MK14 canister quantity increase from FY14 to FY15 due to congressional add for 96 missiles as well as Overseas Contingency Operations funding to procure an additional 47 missiles. MK 14 canister unit cost increase from FY15 to FY16 due to lower production quantities. This budget submittal includes the maximum reuse of remanufactured canisters. FY15 OCO funding associated with the procurement of MK14 canisters associated with the procurement of 47 VLS AURs.

(3) Production line shutdown costs include \$7.5M in FY16 for MK45/CLS unique vendors, \$20M in FY17 and \$13.5M in FY18 for RMS and sub-tiered vendor smart shutdown. An analytical cost comparison was used to project this production line suspension estimate with the following program noted. A-6 shutdown in 1998 at a cost of \$83M, F-14 shutdown in 2004 at a cost of \$125M, F-15 shutdown estimate for \$140M, F/A-18C/D partial shutdown at \$50M, and finally Presidential Helicopter \$100M. While the suspension of the TACTOM is different from that of an aircraft facility, it includes many of the same elements which also encompasses additional 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. The program office has accounted for these activities with the assumption that FMS sales are no longer viable.

(4) -Production Engineering Support in FY16 is associated with the ongoing sustaining engineering in support of TACTOM production. The FY16 missile procurements will deliver over a 9 month period starting 19 months after contract award, which extends deliveries through July 2018. During this period and in accordance with the TACTOM acquisition strategy, the United States Navy provides sustaining engineering support as well as software updates and product acceptance testing. This funding includes support for ten field activities, CSS support, two production acceptance tests, and support of the Service Life Extension Program. -FY16 production engineering support funding will be utilized in association with the production of one variant of the AUR at lower production quantities.

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<b>Exhibit P-5, Cost Analysis: PB 2016 Navy</b>		<b>Date:</b> February 2015
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / 02 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<sup>(5)</sup> -Systems Engineering Support in FY16 is associated with the ongoing sustaining engineering in support of TACTOM production. The FY16 missile procurements will deliver over a 9 month period starting 19 months after contract award, which extends deliveries through July 2018. During this period and in accordance with the TACTOM acquisition strategy, the United States Navy provides sustaining engineering support as well as software updates and product acceptance testing. This funding includes support for ten field activities, CSS support, two production acceptance tests, and support of the Service Life Extension Program. -FY16 systems engineering support funding will be utilized in association with the production of one variant of the AUR at lower production quantities.

<sup>(6)</sup> Support Equipment in the FY17/18/19/20 timeframe is associated with Mid-Body Range Safety System (MRSS) which is used within Tomahawk Flight Tests to control missile flight capabilities. This item is classified within the procurement budget as it is an asset with a system cost greater than the current expense/investment threshold of \$250,000 and is a PMA centrally managed item. FY15 OCO funding in support of procurement of fuel associated with procurement of 47 VLS AUR's.

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**Exhibit P-5a, Procurement History and Planning: PB 2016 Navy** **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / 02 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk
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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>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(†)</sup>		2013 (7)	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Dec 2012	Jul 2014	147	1,015.376	Y		Sep 2010
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(†)</sup>		2014 (8)	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Sep 2014	Aug 2015	142	1,063.078	Y		Apr 2013
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(†)</sup>		2015 (9)	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Jan 2015	Aug 2016	196	1,140.775	Y		Apr 2013
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(†)</sup>	✓	2015 (10)	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Apr 2016	Aug 2017	47	888.596	Y		Apr 2015
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(†)</sup>		2016	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Apr 2016	Nov 2017	100	1,481.860	Y		Apr 2015
1.1.4) TACTICAL TOMAHAWK (CLS) <sup>(†)</sup>		2013	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Dec 2012	Jan 2015	64	1,003.562	Y		Sep 2010
1.1.4) TACTICAL TOMAHAWK (CLS) <sup>(†)</sup>		2014	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Sep 2014	Aug 2015	64	1,071.665	Y		Apr 2013
2.1.2) CCLS SUBMARINE CAPSULES <sup>(†)</sup>		2013	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Dec 2012	Nov 2014	64	374.797	Y		Mar 2011
2.1.2) CCLS SUBMARINE CAPSULES <sup>(†)</sup>		2014	Raytheon Missile System / Tucson, AZ	SS / FP	NAVAIR	Oct 2014	Jul 2015	64	405.546	Y		Apr 2013
2.1.3) MK 14 CANISTERS <sup>(†)</sup>		2014	BAE FY14 - 15 / Minneapolis, MN	C / FP	NAVSEA	Mar 2014	Mar 2015	142	73.303	Y		Jun 2012
2.1.3) MK 14 CANISTERS <sup>(†)</sup>		2015	BAE FY14 - 15 / Minneapolis, MN	C / FP	NAVSEA	Mar 2015	Jan 2016	196	75.247	Y		Jun 2012
2.1.3) MK 14 CANISTERS <sup>(†)</sup>	✓	2015	BAE FY14 - 15 / Minneapolis, MN	C / FP	NAVSEA	Mar 2016	Jan 2017	47	75.247	Y		Jun 2012
2.1.3) MK 14 CANISTERS <sup>(†)</sup>		2016 (11)	BAE / MINNEAPOLIS, MN	C / FP	NAVSEA	Mar 2016	Apr 2017	100	84.300	Y		Jun 2012

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

**Footnotes:**

<sup>(7)</sup> An additional 15 VLS AURs will be procured as a part of the FRP-11 contract which will be delivered in January 2016

<sup>(8)</sup> An additional 10 VLS AURs will be procured as a part of the FRP-12 scheduled for award in January 2015, which will be delivered in August 2016

<sup>(9)</sup> Includes additional FY15 funds (\$81.7M; qty 96) received through a Congressional add to return TACTOM to minimum sustaining rate production levels. FY15 baseline and OCO funding unit cost estimate based upon composite unit cost value (\$1.092M) of total FY15 procurement of 206 VLS AURs (196 FY15 VLS plus 10 FY14 Buy to Budget) quantity.

<sup>(10)</sup> FY15 47 OCO missiles will be procured as part of the FRP13 FY16 buy, which will be delivered from August-November 2017. FY15 baseline and OCO funding unit cost estimate based upon composite unit cost value (\$1.092M) of total FY15 procurement of 206 VLS AURs (196 FY15 VLS plus 10 FY14 Buy to Budget) quantity.

<sup>(11)</sup> MK 14 canister unit cost increase from FY15 to FY16 due to lower production quantities.

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**Exhibit P-21, Production Schedule:** PB 2016 Navy **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / 02 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2013														Fiscal Year 2014														
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2012	BAL DUE AS OF 1 OCT	Calendar Year 2013														Calendar Year 2014													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	B A L			
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(1)</sup>																																		
Prior Years Deliveries: 2283																																		
	1	2013	NAVY	147	-	147			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	14	8	117	
	1	2014	NAVY	142	-	142																										A -	142	
	1	2015	NAVY	196 <sup>(12)</sup>	-	196																											196	
✓	1	2015	NAVY	47	-	47																											47	
	1	2016	NAVY	100	-	100																											100	
1.1.4) TACTICAL TOMAHAWK (CLS)																																		
Prior Years Deliveries: 950																																		
	2	2013	NAVY	64	-	64			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64		
	2	2014	NAVY	64	-	64																										A -	64	
2.1.2) CCLS SUBMARINE CAPSULES																																		
Prior Years Deliveries: 950																																		
	3	2013	NAVY	64	-	64			A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64		
	3	2014	NAVY	64	-	64																											64	
2.1.3) MK 14 CANISTERS <sup>(2)</sup>																																		
Prior Years Deliveries: 2430																																		
	4	2014	NAVY	142	-	142																										A -	142	
	4	2015	NAVY	196 <sup>(13)</sup>	-	196																											196	
✓	4	2015	NAVY	47 <sup>(14)</sup>	-	47																											47	
	5	2016	NAVY	100	-	100																											100	
									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	B A L	



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**Exhibit P-21, Production Schedule: PB 2016 Navy** **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / 02 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2015													Fiscal Year 2016															
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 4	BAL D U E A S O F 1 O C T	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	B A L			
1.1.3) TACTICAL TOMAHAWK (VLS) <sup>(1)</sup>																																		
Prior Years Deliveries: 2283																																		
	1	2013	NAVY	147	30	117	-	14	13	13	13	13	12	12	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1	2014	NAVY	142	-	142	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	12	-	12	12	12	12	12	12	10	-	-		
	1	2015	NAVY	196 <sup>(12)</sup>	-	196				A -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	17	172			
✓	1	2015	NAVY	47	-	47																											47	
	1	2016	NAVY	100	-	100																												100
1.1.4) TACTICAL TOMAHAWK (CLS)																																		
Prior Years Deliveries: 950																																		
	2	2013	NAVY	64	-	64	-	-	-	4	10	10	10	10	10	10																		-
	2	2014	NAVY	64	-	64	-	-	-	-	-	-	-	-	-	-	5	5	5	5	7	7	7	7	7	4	4	4	4				-	
2.1.2) CCLS SUBMARINE CAPSULES																																		
Prior Years Deliveries: 950																																		
	3	2013	NAVY	64	-	64	-	7	7	10	10	10	10	5	5																			-
	3	2014	NAVY	64	-	64	A -	-	-	-	-	-	-	-	-	6	6	6	6	6	6	6	6	6	6	6	6	4					-	
2.1.3) MK 14 CANISTERS <sup>(2)</sup>																																		
Prior Years Deliveries: 2430																																		
	4	2014	NAVY	142	-	142	-	-	-	-	-	14	14	14	14	14	14	14	14	14	6	10												-
	4	2015	NAVY	196 <sup>(13)</sup>	-	196						A -	-	-	-	-	-	-	-	-	-	7	17	18	18	17	17	17	17	17	17	17	51	
✓	4	2015	NAVY	47 <sup>(14)</sup>	-	47																											47	
	5	2016	NAVY	100	-	100																												100
							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	B A L			

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Exhibit P-21, Production Schedule: PB 2016 Navy																		Date: February 2015																																														
Appropriation / Budget Activity / Budget Sub Activity:												P-1 Line Item Number / Title:								Item Number / Title [DODIC]:																																												
1507N / 02 / 1												2101 / Tomahawk								1 / Tomahawk																																												
Cost Elements (Units in Each)						Fiscal Year 2017												Fiscal Year 2018																																														
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	B A L																																	
1.1.3) TACTICAL TOMAHAWK (VLS) (1) Prior Years Deliveries: 2283																																																																
	1	2013	NAVY	147	147	-																																																										
	1	2014	NAVY	142	142	-																																																										
	1	2015	NAVY	196 (12)	24	172	18	18	17	17	17	17	17	17	17																																																	
✓	1	2015	NAVY	47	-	47	-	-	-	-	-	-	-	-	-	12	12	12	11																																													
	1	2016	NAVY	100	-	100	-	-	-	-	-	-	-	-	-	-	-	2	12	13	12	12	13	12	12	12																																						
1.1.4) TACTICAL TOMAHAWK (CLS) Prior Years Deliveries: 950																																																																
	2	2013	NAVY	64	64	-																																																										
	2	2014	NAVY	64	64	-																																																										
2.1.2) CCLS SUBMARINE CAPSULES Prior Years Deliveries: 950																																																																
	3	2013	NAVY	64	64	-																																																										
	3	2014	NAVY	64	64	-																																																										
2.1.3) MK 14 CANISTERS (2) Prior Years Deliveries: 2430																																																																
	4	2014	NAVY	142	142	-																																																										
	4	2015	NAVY	196 (13)	145	51	17	17	17																																																							
✓	4	2015	NAVY	47 (14)	-	47	-	-	-	12	12	12	11																																																			
	5	2016	NAVY	100	-	100	-	-	-	-	-	-	2	12	13	12	12	13	12	12	12																																											
<table border="0"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>O C T</td><td>N O V</td><td>D E C</td><td>J A N</td><td>F E B</td><td>M A R</td><td>A P R</td><td>M A Y</td><td>J U N</td><td>J U L</td><td>A U G</td><td>S E P</td><td>O C T</td><td>N O V</td><td>D E C</td><td>J A N</td><td>F E B</td><td>M A R</td><td>A P R</td><td>M A Y</td><td>J U N</td><td>J U L</td><td>A U G</td><td>S E P</td><td>B A L</td> </tr> </table>																																								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	B A L
							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	B A L																																	

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**Exhibit P-21, Production Schedule:** PB 2016 Navy **Date:** February 2015

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 1507N / 02 / 1	<b>P-1 Line Item Number / Title:</b> 2101 / Tomahawk	<b>Item Number / Title [DODIC]:</b> 1 / Tomahawk
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MFR Ref #	MFR Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)								
		MSR For 2016	1-8-5 For 2016	MAX For 2016	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Mfg PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Mfg PLT	Total After Oct 1	
1	Raytheon Missile System - Tucson, AZ	196	360	456	-	-	-	-	-	-	10	16	26
2	Raytheon Missile System - Tucson, AZ	196	360	456	-	-	-	-	-	-	-	-	-
3	Raytheon Missile System - Tucson, AZ	20	64	123	-	-	-	-	-	-	-	-	-
4	BAE FY14 - 15 - Minneapolis, MN	243	243	243	-	-	-	-	-	-	6	13	19
5	BAE - MINNEAPOLIS, MN	100	100	100	-	-	-	-	-	-	6	13	19

"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:**

<sup>(12)</sup> FY15 47 OCO missiles will be procured as part of the FRP13 FY16 buy, which will be delivered from August-November 2017.

<sup>(13)</sup> MSR/MAX Production rates are based on canister contract constraints, the maximum production rate for FY16 is 100. Multiple canister configurations are manufactured at BAE in Aberdeen, South Dakota for multiple customers in the same production facility. The family of canisters includes: MK 7, MK 8, MK 13, MK 14, MK 15, MK 21 and MK 236. As a result of the broad number of customers, the demand level is sufficient for the industrial base. There is not a specific MSR for the MK 14 Tactical Tomahawk canister. MSR would be a factor of the entire family of canisters.

<sup>(14)</sup> FY15 47 OCO MK14 Canisters will be procured as part of the FRP13 FY16 buy, which will be delivered from January-April 2017.