

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy** **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	0.000	38.826	35.614	40.648	-	40.648	39.370	38.247	38.504	35.018	Continuing	Continuing
0223: <i>Sub Combat System Improvement (ADV)</i>	0.000	0.123	0.124	0.130	-	0.130	0.128	0.122	0.121	0.120	Continuing	Continuing
0824: <i>Science &amp; Technology Management</i>	0.000	22.206	18.445	23.317	-	23.317	25.669	25.610	25.760	22.644	Continuing	Continuing
1447: <i>Surf Combatant Combat System Imp</i>	0.000	0.107	0.221	0.210	-	0.210	0.184	0.178	0.182	0.183	Continuing	Continuing
3159: <i>Naval Integrated Fire Control-Counter Air SE&amp;I</i>	0.000	0.107	0.216	0.205	-	0.205	0.180	0.175	0.179	0.181	Continuing	Continuing
3186: <i>Air and Missile Defense Radar</i>	0.000	0.514	0.529	0.324	-	0.324	0.671	0.627	0.550	0.556	Continuing	Continuing
3216: <i>Tactical Support Center-Integration</i>	0.000	0.015	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.015
3345: <i>ONR Management Headquarters</i>	0.000	15.754	16.079	16.462	-	16.462	12.538	11.535	11.712	11.334	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Management HQ - R&D program funds management headquarter civilian personnel salaries at the Office of Naval Research (ONR). These personnel support the management of the Naval Science and Technology (S&T) programs. This program also funds management headquarter contractor support for the Integrated Warfare Systems (IWS) Program Executive Office.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2023 Navy	<b>Date:</b> April 2022
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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
Previous President's Budget	41.091	35.614	0.000	-	0.000
Current President's Budget	38.826	35.614	40.648	-	40.648
Total Adjustments	-2.265	0.000	40.648	-	40.648
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.500	0.000			
• SBIR/STTR Transfer	-0.765	0.000			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	40.648	-	40.648

**Change Summary Explanation**

Funding: The FY 2023 funding request was adjusted by \$1.184M to account for the availability of prior year execution balances.

FY 2023 funding increase supports an increase in S&T corporate support services.

Technical: No significant change.

Technical: No significant change.

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FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D				<b>Project (Number/Name)</b> 0223 / Sub Combat System Improvement (ADV)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0223: Sub Combat System Improvement (ADV)	0.000	0.123	0.124	0.130	-	0.130	0.128	0.122	0.121	0.120	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides management headquarters contractor support to the Integrated Warfare Systems (IWS) Program Executive Office (PEO). This work supports Navy Acoustic Superiority and Technology Insertion Initiatives through the application of advanced development and testing of sensors and sensor processing systems supporting tactical control systems improvements. This addresses technology challenges to improve tactical control in littoral and open ocean environments for a variety of operational missions.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<b>Title:</b> Management Headquarters Personnel	0.123	0.124	0.130	0.000	0.130
<b>Articles:</b>	-	-	-	-	-
<b>FY 2022 Plans:</b> - Continue APB development, integration, land-based testing, at-sea testing, and establishment of tactical scenarios.					
<b>FY 2023 Base Plans:</b> - Continue APB development, integration, land-based testing, at-sea testing, and establishment of tactical scenarios.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> FY 2022 (\$0.124M) to FY 2023 (\$0.130M) increase (\$+0.006M) is in line with the standard rate of inflation for the RDTEN appropriation.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.123	0.124	0.130	0.000	0.130

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy		<b>Date:</b> April 2022
<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>	<b>Project (Number/Name)</b> 0223 / <i>Sub Combat System Improvement (ADV)</i>

**D. Acquisition Strategy**  
N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D				<b>Project (Number/Name)</b> 0824 / Science & Technology Management			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0824: Science & Technology Management	0.000	22.206	18.445	23.317	-	23.317	25.669	25.610	25.760	22.644	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project funds all basic costs of Office of Naval Research Management Headquarters Activity (MHA) non-labor in support of the entire Navy Science & Technology (S&T) program. Through this support, the S&T enterprise pursues the technological advances that enable the Fleet's ability to operate from a position of technological superiority.

Specifically, funding facilitates the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<b>Title:</b> Science and Technology Management	22.206	18.445	23.317	0.000	23.317
<b>Articles:</b>	-	-	-	-	-
<b>FY 2022 Plans:</b> Provides corporate MHA Non-Labor support in facilitating the purchase of the S&T programs for the Navy to ensure consistent external reporting.					
<b>FY 2023 Base Plans:</b> Continue to provides corporate MHA Non-Labor support in facilitating the purchase of the S&T programs for the Navy to ensure consistent external reporting.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Increase in FY2023 due to right sizing of S&T corporate support services that were reduced during remote work environment caused by COVID 19.					
<b>Accomplishments/Planned Programs Subtotals</b>	22.206	18.445	23.317	0.000	23.317

**C. Other Program Funding Summary (\$ in Millions)**

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy Date: April 2022

<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>	<b>Project (Number/Name)</b> 0824 / <i>Science &amp; Technology Managment</i>
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**C. Other Program Funding Summary (\$ in Millions)**

**Remarks**

**D. Acquisition Strategy**

N/A

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**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D	<b>Project (Number/Name)</b> 1447 / Surf Combatant Combat System Imp
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
1447: Surf Combatant Combat System Imp	0.000	0.107	0.221	0.210	-	0.210	0.184	0.178	0.182	0.183	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This work supports Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrates new equipment and systems to pace the threat and capture advances in technology.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
<b>Title:</b> Management Headquarter Personnel	0.107	0.221	0.210	0.000	0.210
<b>Articles:</b>	-	-	-	-	-
<b>FY 2022 Plans:</b> Continue to support Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrate new equipment and systems to pace the threat and capture advances in technology.					
<b>FY 2023 Base Plans:</b> Continue to support Cruiser and Destroyer AEGIS Combat System (ACS) upgrades and integrate new equipment and systems to pace the threat and capture advances in technology.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> No Significant Change					
<b>Accomplishments/Planned Programs Subtotals</b>	0.107	0.221	0.210	0.000	0.210

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

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**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D	<b>Project (Number/Name)</b> 3159 / Naval Integrated Fire Control-Counter Air SE&I
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3159: <i>Naval Integrated Fire Control-Counter Air SE&amp;I</i>	0.000	0.107	0.216	0.205	-	0.205	0.180	0.175	0.179	0.181	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This work supports Naval Integrated Fire Control - Counter Air (NIFC-CA) project. Through this support technological advances are being developed enabling PEO IWS to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
<b>Title:</b> Management Headquarter Personnel	0.107	0.216	0.205	0.000	0.205
<b>Articles:</b>	-	-	-	-	-
<b>FY 2022 Plans:</b> Support the Navy's research and development efforts for NIFC-CA's System Engineering, Integration and Test (SEI&T) project. Assist with Test Events At SEA and Land Based Test events.					
<b>FY 2023 Base Plans:</b> Support the Navy's research and development efforts for NIFC-CA's System Engineering, Integration and Test (SEI&T) project. Assist with Test Events At SEA and Land Based Test events.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> No significant change					
<b>Accomplishments/Planned Programs Subtotals</b>	0.107	0.216	0.205	0.000	0.205

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

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**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D	<b>Project (Number/Name)</b> 3186 / Air and Missile Defense Radar
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3186: Air and Missile Defense Radar	0.000	0.514	0.529	0.324	-	0.324	0.671	0.627	0.550	0.556	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). Through this support, technological advances are being developed, enabling PEO IWS to deliver "Enterprise" solutions for Naval Warfare Systems that operate seamlessly and effectively within the Fleet and Joint Forces.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
<b>Title:</b> Management Headquarter Personnel	0.514	0.529	0.324	0.000	0.324
<b>Articles:</b>	-	-	-	-	-
<b>FY 2022 Plans:</b> Continue risk reduction testing at Advanced Radar Development Evaluation Laboratory (ARDEL), including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity.					
<b>FY 2023 Base Plans:</b> Continue risk reduction testing at ARDEL, including refinement of radar operation functions (calibration, fault detection/fault isolation, environmental adaptation), improving electronic protection capabilities, and continue data collection on ballistic missile defense targets of opportunity.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b> Decrease aligns with planned development efforts.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.514	0.529	0.324	0.000	0.324

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy	<b>Date:</b> April 2022
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<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D	<b>Project (Number/Name)</b> 3186 / Air and Missile Defense Radar
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDT&E/0604522N: <i>Air and Missile Defense Radar (AMDR) System</i>	78.319	98.186	90.538	-	90.538	90.174	91.269	84.381	0.000	Continuing	Continuing

**Remarks**

**D. Acquisition Strategy**

N/A

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**Exhibit R-2A, RDT&E Project Justification:** PB 2023 Navy **Date:** April 2022

<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>	<b>Project (Number/Name)</b> 3216 / <i>Tactical Support Center-Integration</i>
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
3216: <i>Tactical Support Center-Integration</i>	0.000	0.015	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.015
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project provides management headquarters contractor support to the Integrated Warfare System (IWS) Program Executive Office (PEO). This supports AN/SQQ-34 Aircraft Carrier Tactical Support Center (CV-TSC) fulfillment of Anti-Submarine Warfare (ASW) and Surface Warfare (SUW) coordination functions utilizing data received from multiple sources to assess the threat and assist the Tactical Action Officer (TAO) and Composite Warfare Commander (CWC) in effectively applying available resources to support CVN self-defense. This supports CV-TSC functionality updates being implemented through an evolutionary acquisition approach, providing phased incremental builds that are developed, tested, certified and fielded.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
<b>Title:</b> Management Headquarter Personnel	0.015	0.000	0.000	0.000	0.000
<b>Articles:</b>	-	-	-	-	-
<b>FY 2022 Plans:</b> N/A					
<b>FY 2023 Base Plans:</b> N/A					
<b>FY 2023 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	0.015	0.000	0.000	0.000	0.000

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2023 Navy										<b>Date:</b> April 2022		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605898N / Management HQ - R&D				<b>Project (Number/Name)</b> 3345 / ONR Management Headquarters			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>FY 2027</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3345: ONR Management Headquarters	0.000	15.754	16.079	16.462	-	16.462	12.538	11.535	11.712	11.334	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This project funds all basic costs of Office of Naval Research Management Headquarters Activity (MHA) salaries in support of the entire Navy Science & Technology (S&T) program. Through this support, the S&T enterprise pursues the technological advances that enable the Fleet's ability to operate from a position of technological superiority.

Specifically, funding facilitates the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023 Base</b>	<b>FY 2023 OCO</b>	<b>FY 2023 Total</b>
<b>Title:</b> Management Headquarters Personnel	15.754	16.079	16.462	0.000	16.462
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> N/A					
<b>FY 2022 Plans:</b> Continue to provides corporate MHA personnel salaries to facilitate the purchase of the S&T programs for the Navy to ensure consistent external reporting. All Non-Operational HQ is now Major Headquarters Activity (MHA).  Continue to reduce auditability challenges to meet the mandate.					
<b>FY 2023 Base Plans:</b> Continue to provides corporate MHA personnel salaries to facilitate the purchase of the S&T programs for the Navy to ensure consistent external reporting. All Non-Operational HQ is now Major Headquarters Activity (MHA).  Continue to reduce auditability challenges to meet the mandate.					
<b>FY 2023 OCO Plans:</b> N/A					
<b>FY 2022 to FY 2023 Increase/Decrease Statement:</b>					

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<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605898N / <i>Management HQ - R&amp;D</i>	<b>Project (Number/Name)</b> 3345 / <i>ONR Management Headquarters</i>
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
No significant change from FY 2022 to FY 2023					
<b>Accomplishments/Planned Programs Subtotals</b>	15.754	16.079	16.462	0.000	16.462

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

N/A