Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy	Date: March 2019
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605154N / *Center For Naval Analyses*

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	0.000	44.302	42.693	47.669	-	47.669	47.372	48.916	50.002	51.058	Continuing	Continuing
0031: *MCOAG*	0.000	5.487	4.489	6.421	-	6.421	6.566	6.701	6.839	6.976	Continuing	Continuing
0148: *Center For Naval Analyses (CNA)*	0.000	38.815	38.204	41.248	-	41.248	40.806	42.215	43.163	44.082	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Center for Naval Analyses (CNA) is the Department of the Navy's (DoN) only Federally Funded Research and Development Center (FFRDC). CNA provides independent, objective, and expert analyses based on its unique access to sensitive data and hands-on exposure to fleet operations gained through its world-wide field program. CNA's research program is centrally funded by this program element and is primarily concentrated along one Marine Corps category and thirteen Navy categories of study called product areas. These product areas are structured to enhance CNA's focus of research and analysis upon the major present and future needs and issues of the Navy and the Marine Corps. Because of rapid advances in technology, changes in the fleet, the increasing complexity of weapon systems, and reductions in manpower, force structure, budgets, the current security environment, and Department of Defense (DoD) transformation, the Navy and Marine Corps have a greater need for analyses that are sophisticated, relevant, and timely. CNA conducts research and analysis at all security classification levels, to include Sensitive Compartmented Information (SCI) and Special Access Programs (SAP).

Due to the number of efforts in this PE, the programs described herein are representative of the work included in this PE.

B. Program Change Summary ($ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	50.432	48.797	50.578	-	50.578
Current President's Budget	44.302	42.693	47.669	-	47.669
Total Adjustments	-6.130	-6.104	-2.909	-	-2.909
• Congressional General Reductions	-	-6.104			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.756	0.000			
• Rate/Misc Adjustments	0.000	0.000	-2.909	-	-2.909
• Congressional General Reductions Adjustments	-4.374	-	-	-	-

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2020 Navy	**Date:** March 2019
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy* / BA 6: *RDT&E Management Support*	**R-1 Program Element (Number/Name)** PE 0605154N / *Center For Naval Analyses*

Change Summary Explanation

The funding increase from FY 2019 to FY 2020 reflects increased support in critical subject areas in support of research efforts for the Navy/Marine Corps.

Technical: N/A

Schedule: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605154N / *Center For Naval Analyses*	Project (Number/Name) 0031 / *MCOAG*	

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
0031: *MCOAG*	0.000	5.487	4.489	6.421	-	6.421	6.566	6.701	6.839	6.976	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the Marine Corps portion of the Department of Navy, CNA, Center for Naval Analysis Research Program, and is managed as an element of the Marine Corps Studies System. This program provides the Marine Corps with independent and objective research and analysis of specific issues/topics appropriately performed by a Federally Funded Research and Development Center (FFRDC). Marine Corps Division analysts work at CNA headquarters and, through CNA's Field representative Program serve at commands worldwide, including: Marine Forces Command, Marine Forces Pacific, Marine Special Operations Command, the three Marine Expeditionary Forces, Marine Aviation Weapons and Tactics Squadron One (MAWTS-1), and in Iraq, providing on-site analysis to deployed Marine forces there. CNA also assigns analysts to support the Deputy Commandants and their staffs as well as other Marine Corps organizations such as the Marine Corps Warfighting Lab, Marine Corps Systems Command, and the Commander, Marine Forces Reserve.

The program areas are linked to the Marine Corps Advocacy (prepotency), which are: (1) Logistics and Infrastructure; (2) Manpower and Training; (3) Research, Development and Acquisition; (4) Operations and Plans; (5) Programs and Resources; (6) Aviation; (7) Combat Development and Integration; and (8) Intelligence, Surveillance and Reconnaissance. Scientific Analyst support provides six scientific analysts for the following six focus areas: Deputy Commandant (DC), Plans, Policies and Operations; DC Aviation; DC Installation and Logistics; DC Programs and Resources; DC Manpower Reserve Affairs; and Director, Manpower Plans (MP) - Manpower and Reserve Affairs (M&RA). The program continues analytical support for field exercises, Ad Hoc and Quick Response study requirements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: MARINE CORPS OPERATIONS AND ANALYSIS GROUP	5.487	4.489	6.421	0.000	6.421
Articles:	-	-	-	-	-
FY 2019 Plans: Conduct new studies in support of the FY 2019 Marine Corps Studies System Master Plan (MCSSMP) including the following priority areas: applying USMC capabilities today, balancing current demands against future readiness, innovating to enhance Marine Corps warfighting advantages, ways and means for USMC strategy and policy, and operating the Marine Corps more effectively and efficiently. Continue the FY 2018 analytic focus in support of CMC priorities. Enhanced support and increased capacity to address CMC priorities such as: - The relative threats posed by our major adversaries (e.g., Russian resurgence and PRC capabilities and activities) - Prosecuting global campaigns - Enabling and supporting distributed operations					

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 6	**R-1 Program Element (Number/Name)** PE 0605154N / *Center For Naval Analyses*	**Project (Number/Name)** 0031 / *MCOAG*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
- Integrating information operations into the MAGTF construct both organizationally and to maximize effects on the battlefield - Leveraging autonomy and artificial intelligence to establish and maintain dominance over existing and emerging threats - Using big data/data science/predictive analysis to gain comparative advantage - Improving the use of gaming in Navy learning and research - Leveraging our analytic efforts for the Navy to support USMC priorities. ***FY 2020 Base Plans:*** Initiate new studies in support of the FY 2020 Marine Corps Studies System Master Plan (MCSSMP) including the following priority areas: applying USMC capabilities today, balancing current demands against future readiness, innovating to enhance Marine Corps warfighting advantages, ways and means for USMC strategy and policy, and operating the Marine Corps more effectively and efficiently. Continue the FY 2019 analytic focus in support of CMC priorities. Enhanced support and increased capacity to address CMC priorities. ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:*** Increase FY 2019 to FY 2020 reflects program demands for increased support and analyses directed by the Commanding General Combat Development and Integration (CD&I) in the areas of Combat Strategies; Force Protection; Protective Equipment (A0A); Troop Training and Planning and Wargaming.					
Accomplishments/Planned Programs Subtotals	5.487	4.489	6.421	0.000	6.421

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

This project supports the Marine Corps portion of the Department of Navy, CNA Center for Naval Analysis Research Program, and is managed as an element of the Marine Corps Studies System. This program provides the Marine Corps with independent and objective research and analysis of specific issues/topics appropriately performed by a Federally Funded Research and Development Center (FFRDC). Marine Corps Division analysts work at CNA headquarters and, through CNA's Field

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 6	**R-1 Program Element (Number/Name)** PE 0605154N / *Center For Naval Analyses*	**Project (Number/Name)** 0031 / *MCOAG*

representative Program, serve at commands worldwide, including: Marine Forces Command, Marine Forces Pacific, Marine Special Operations Command, the three Marine Expeditionary Forces, Marine Aviation Weapons and Tactics Squadron One (MAWTS-1), and in Iraq, providing on-site analysis to deployed Marine forces there. CNA also assigns analysts to support the Deputy Commandants and their staffs as well as other Marine Corps organizations such as the Marine Corps Warfighting Lab, Marine Corps Systems Command, and the Commander, Marine Forces Reserve.

The program areas are linked to the Marine Corps Advocacy (prepotency), which are: (1) Logistics and Infrastructure; (2) Manpower and Training; (3) Research, Development and Acquisition; (4) Operations and Plans; (5) Programs and Resources; (6) Aviation; (7) Combat Development and Integration; and (8) Intelligence, Surveillance and Reconnaissance. Scientific Analyst support provides six scientific analysts for the following six focus areas: Deputy Commandant (DC), Plans, Policies and Operations; DC Aviation; DC Installation and Logistics; DC Programs and Resources; DC Manpower Reserve Affairs; and Director, Manpower Plans (MP) - Manpower and Reserve Affairs (M&RA).

The Marine Corps' portion of the CNA program is executed via the Marine Corps Studies System (MCSS) Annual Plan which is reviewed and updated on a quarterly basis. The MCSS maintains a comprehensive listing of all CNA studies performed for the Marine Corps. The MCSS ensures there are no duplicate analytical efforts within the Marine Corps. Additionally, the Operations Analysis Division of Combat Integration Division (CD&I, MCCDC) provides analytical review of all CNA products for the Marine Corps and integrates the results and recommendations into a quarterly newsletter for research and analysis.

Other evaluation processes are as follows:
A) Contract Status Meetings: The Marine Corps participates in contract status meetings. The Contracting Officer chairs monthly meetings with the Marine Corps, and members of the CNA Business Support Group to provide guidance regarding contract management to include reviewing the Defense Technical Information Center (DTIC) database requirements to emphasize the contractual requirement that all ongoing research be submitted to DTIC to ensure against duplication to reviewing CNA's cost effectiveness and efficiency.

B) Marine Corps Three-Star Flag Officer Review: The Commanding General, CD&I, MCCDC and the Director, Operations Analysis Division (OAD) frequently to review the current research program and provide guidance to CNA regarding future research requirements. Meetings are essential to provide CNA to ensure that research conducted is of the greatest value to the Marine Corps. The meetings serve as a roadmap for future projects. The Marine Corps' research plan is consolidated with the DoN's Annual Plan that is submitted to the Deputy Chief of Naval Operations for Integration of Capabilities and Resources (N8) for final review and acceptance.

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy			Date: March 2019
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605154N / *Center For Naval Analyses*	Project (Number/Name) 0148 / *Center For Naval Analyses (CNA)*	

COST ($ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
0148: *Center For Naval Analyses (CNA)*	0.000	38.815	38.204	41.248	-	41.248	40.806	42.215	43.163	44.082	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program supports the Navy's portion of the CNA Research Program, which is primarily concentrated along thirteen Navy categories of study called product areas. These product areas include the following: (1) Manpower/Personnel, Medical and Training; (2) Intelligence, Information and Networks; (3) Plans, Policy, and Operations; (4) Infrastructure and Readiness; (5) Resources, Programs, and Assessments; (6) Capability Integration; (7) Research, Development and Acquisition; (8) Navy Field Program; (9) Navy Field Exercise Program; (10) Scientific Analyst Program; (11) Navy Quick Response Projects; (12) Navy General Concept Development and (13) CNA Initiated Projects. This program provides the Navy with independent and objective research and analysis of specific issues/topics appropriately performed by a FFRDC and includes studies support (to include quick response studies support), field support to fleet commanders, scientific analyst support to Deputy Chiefs of Naval Operations (DCNOs) and their staffs, exercise support, and ad hoc support. CNA's analyses have resulted in substantial improvements in force structure, fleet effectiveness, and significant cost avoidance

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: CENTER FOR NAVAL ANALYSES, NAVY	38.815	38.204	41.248	0.000	41.248
Articles:	-	-	-	-	-

Description: Funding in this project supports integrated research for the Department of Navy (DoN) and other DoD components across a broad range of issues including the development and evaluation of tactics, operations testing of new systems, assessment of current capabilities, logistics and readiness, work-force management, space and space-related activities, cyber operations, cost and operational program analysis, assessment of advanced technology, force planning, and strategies implications of political-military developments.

FY 2019 Plans:
Continue all efforts in support of CNO priorities, to include, maintaining maritime superiority for the future, applying maritime power today, Navy strategy and policy, strategic workforce planning and management, operating the Navy more efficiently and effectively, balancing current and future readiness, understanding great power and dynamics.
Conduct new studies in the following priority areas:
- Applying maritime power today
- Maintaining maritime superiority for the future
- Innovating to compete and win

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 6	**R-1 Program Element (Number/Name)** PE 0605154N / *Center For Naval Analyses*	**Project (Number/Name)** 0148 / *Center For Naval Analyses (CNA)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
- Balancing current and future readiness - Understanding great power dynamics - Aligning ends, ways and means for Navy strategy and policy - Operating the Navy more efficiently and effectively - Strategic workforce planning - Enhanced support and increased capacity to address emerging CNO priorities including Russia's resurgence and implications for the Navy and its partners - Aligning the programming and budgeting process with Navy strategy - Enabling distributed networked operations - Leveraging autonomy and artificial intelligence to establish and maintain dominance over emerging threats - Using big data/data science/predictive analytics to gain competitive advantage; and integrating gaming into Navy learning and research ***FY 2020 Base Plans:*** CNA conducts individual analytic efforts for a wide range of DoN and DoD sponsors including: OPNAV and HQMC, the Navy Secretariat, Type Commanders, the numbered Fleets and Navy/Marine Corps component commanders, Combatant Commands, operational test and evaluation (OT&E) activities including OPTEVFOR and DOT&E, SYSCOMs, Office of the Secretary of Defense, Defense agencies and the Defense Intelligence Community. In FY 2020 CNA will provide study and analysis support on critical Navy corporate priorities. This analysis will review strategic efforts, including engagement with peer competitors and disruptive actions globally. In addition, CNA will help Navy address internal processes from logistics to personnel policies. As the only Navy funded FFRDC, CNA will be integral in the development of future initiatives; including big data and machine learning. CNA will also continue to provide analytical support to selected wargames and exercises; providing detailed analysis of each event to identify areas of improvement for Navy Operational procedures. ***FY 2020 OCO Plans:*** N/A ***FY 2019 to FY 2020 Increase/Decrease Statement:*** The increase from FY 2019 to FY 2020 reflects increased support from CNA in critical subject areas in support of Navy/Marine Corps research efforts.					
Accomplishments/Planned Programs Subtotals	38.815	38.204	41.248	0.000	41.248

Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 6	**R-1 Program Element (Number/Name)** PE 0605154N / *Center For Naval Analyses*	**Project (Number/Name)** 0148 / *Center For Naval Analyses (CNA)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

CNA is reviewed throughout the research year on several different levels to ensure that research produced is not duplicated elsewhere. The primary (and most effective) method of review for duplication is the Contracting Officer's Technical Representative (COTR) review and approval of each and every project proposal submitted by CNA. This method is highly effective in providing the necessary oversight to ensure that duplication of effort does not occur. The Marine Corps Studies System (MCSS) maintains a comprehensive listing of all CNA studies performed for the USMC. The MCSS ensures that there are no duplicate analytical efforts within the USMC. Additionally, the Studies and Analysis Division of the Marine Corps Combat Development Command (MCCDC) provides analytical review of all CNA products for the USMC and integrates the results and recommendations into a quarterly newsletter and an annual plan for research and analysis.
Other evaluation processes:

A) DoN Contract Status Meetings: As part of the CNA oversight process, the Office of Naval Research Contracting Officer chairs a monthly meeting with the COTR, the USMC, and the CNA's Chief Financial Office to provide guidance regarding contract management.

B) Two-Star Flag Officers and VCNO Corporate Board Meetings: DoN Two-Star and their equivalent civilian counterparts meet several times a year to review the current fiscal year's research and provide guidance to CNA regarding their future research for DoN. These high level meetings are essential to provide CNA with DoN's guidance to ensure that the research conducted is of the greatest value to DoN. The meetings also serve as the catalyst for the formation of the CNA Annual Plan, CNA's roadmap for research during the upcoming fiscal year. The CNA Annual Plan is then submitted to VCNO/N8 for final review and acceptance.

C) CNA Comprehensive Review: Prior to contract renewal, CNA, as an Federally Funded Research and Development Center (FFRDC), must be evaluated to ensure that the DoN wants to renew CNA's contract for an additional five year period. DoN completes an exhaustive review of sponsors' technical needs and mission requirements; DoN's consideration of other sources; CNA's efficiency and effectiveness; CNA's management and cost effectiveness; as well as the FFRDC establishment criteria and sponsorship agreement. The CNA Comprehensive Review is approved by ASN (RDA) and accepted by OSD (AT&L).

D) Navy-CNA Integration Board. DON 3-stars and CNA leadership meet quarterly to review the annual research program, discuss priorities and related implications for current and future work, and address issues impacting CNA's ability to execute its mission as an FFRDC. CNA research highlights are also briefed and discussed. The board meetings are chaired by the Director, Navy Staff.