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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>					R-1 Program Element (Number/Name) PE 0603239N / (U)NAVAL CONSTRUCTION FORCES							
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	2.251	5.271	1.706	7.821	-	7.821	7.640	4.038	3.408	3.261	Continuing	Continuing
3444: <i>Airfield/Port Damage Repair</i>	2.251	5.271	1.706	7.821	-	7.821	7.640	4.038	3.408	3.261	Continuing	Continuing

A. Mission Description and Budget Item Justification

Project 3444 directly supports Joint Force resiliency in accordance with the National Defense Strategy (NDS) of 2022, A Design for Maintaining Maritime Superiority 2.0, and the NAVFAC Strategic Design 2.0 Guidance. Investment in EABO technologies enables Naval Construction Force (NCF) capability modernization and adaption for Naval Integration. These technologies enable capabilities such as Airfield Damage Repair (ADR), Port Damage Repair (PDR), Expeditionary Ordnance Re-load (ExORD), Expeditionary Fuel Distribution (ExFUEL), and Expeditionary Force Sustainment in a littoral environment. New warfighting concepts and Marine Corps organizational changes will necessitate future changes to NCF capabilities, organization, and table of allowance material. Further, mobile infrastructure capabilities are envisioned to supplement these vulnerable fixed airfield and port infrastructure assets. This program provides for investment in technologies, materials, and process solutions to improve logistics resiliency and enhance Expeditionary Navy performance in the following portfolio areas; ADR, PDR, Expeditionary Engineering Materials and Equipment (EEME), and Advanced Manufacturing (AdvM). The AdvM portfolio area has been aligned under Project 3444 beginning in FY24, complementary efforts previously funded under RDTE,N PE/Project 0204413N/2477.

Investments that facilitate rapid ADR include; saltwater concrete, full-depth reclamation, autonomous airfield inspection and survey, and follow-on RDTE for transition of Joint Capability Technology Demonstration (JCTD) products. Additional investments that facilitate PDR include; mini robotic salvage dredge research, expedient pier assessment and repair, quay wall repair technologies, port assessment sensor integration of survey data for real time operational decisions, and integration of metadata for 3D virtual assessments. Innovative AdvM capabilities will address the operational and logistic deficiencies associated with obtaining repair parts and producing EOD training aids during distributed maritime operations (DMO) along with other predicted readiness and expeditionary operational challenges. The Expeditionary Navy will gain the capability to print parts, material, and structures in austere environments at remote sites with limited external logistical support to augment the existing supply system, and to bridge gaps and shortfalls keeping personnel and equipment actively engaged in mission execution. This effort will develop and assess technologies for Organizational-Level Maintenance (OM) usage; develop and assess modified COTS and GOTS AdvM equipment, techniques, and procedures for Intermediate-Level Maintenance (IM) usage to mitigate logistics gaps during operational events within the Expeditionary Navy. Development includes evaluation and modification of the Expeditionary Fabrication (EXFAB) concept to meet expeditionary warfighter requirements as detailed in the NECE Advanced Manufacturing Analysis of Alternatives.

Development of alternative expeditionary engineering materials and equipment will maximize agility and resiliency while minimizing supply chain risk. These technologies will enable in-the-field production of parts (including original and spare parts for expeditionary equipment) and in-situ fabrication of expeditionary structures. This includes production equipment (such as advanced manufacturing systems), raw materials (such as locally sourced construction materials), inspection and quality certification equipment, as well as support methods and criteria to employ these systems in the expeditionary environment. New concepts for expeditionary engineering equipment technologies enhance expeditionary engineering operations, to include site identification, selection, and planning; site clearing and preparation; construction activities; site operations support (including local material handling, damage repair, etc.); and site deconstruction and retrograde activities. Technologies demonstrated

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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603239N / (U)NAVAL CONSTRUCTION FORCES
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will provide required engineer support capability while maximizing the ability to deploy (by minimizing size and weight) and enhancing operator safety (by providing direct operator protection or allowing for remote or autonomous operation).

The results of these efforts will enhance Navy force response plans, and Joint Force Commander's flexibility to deploy and employ from expeditionary airfields, as well as deliver and sustain warfighting capabilities at the point of effect. This includes "right size, just-in-time" technologies that can facilitate both conventional and autonomous rapid assessment, repair, and re-constitution of expeditionary airfields. These efforts to develop technologies supporting NCF's PDR capabilities include just-in-time assessment and rapid repair of piers, quay- walls, fleet moorings, critical expeditionary waterfront facilities and infrastructure, and port facilities above, at, and below the waterline to enable the reviving, re-armament, repair, re-fueling, re-calibration and re-constitution of fleet platforms at Sea Ports of Debarkation (SPODs) available during Major Combat Operations (MCO). FYDP effort involves transitioning these capabilities into a program of record within an existing Table of Allowance (TOA) and Supports NDS requirements of Resilient and Agile Logistics and supplements the Navy's ExADR Program of DMO 38-Operational Logistics allowing dynamic operational maneuverability with both fixed and mobile logistics

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	5.290	1.706	2.465	-	2.465
Current President's Budget	5.271	1.706	7.821	-	7.821
Total Adjustments	-0.019	0.000	5.356	-	5.356
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.019	0.000			
• Program Adjustments	0.000	0.000	5.300	-	5.300
• Rate/Misc Adjustments	0.000	0.000	0.056	-	0.056

Change Summary Explanation

Increase of \$6.115 million is due to the requirement to mitigate deficiencies identified in the PDR AoA and re-alignment of the advanced manufacturing capability set under project 3444.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Navy										Date: March 2023		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603239N / (U)NAVAL CONSTRUCTIO N FORCES				Project (Number/Name) 3444 / Airfield/Port Damage Repair			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
3444: Airfield/Port Damage Repair	2.251	5.271	1.706	7.821	-	7.821	7.640	4.038	3.408	3.261	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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Investments that facilitate rapid ADR include; saltwater concrete, full-depth reclamation, autonomous airfield inspection and survey, and follow-on RDTE for transition of Joint Capability Technology Demonstration (JCTD) products. Additional investments that facilitate PDR include; mini robotic salvage dredge research, expedient pier assessment and repair, quay wall repair technologies, port assessment sensor integration of survey data for real time operational decisions, and integration of metadata for 3D virtual assessments. Innovative AdvM capabilities will address the operational and logistic deficiencies associated with obtaining repair parts and producing EOD training aids during distributed maritime operations (DMO) along with other predicted readiness and expeditionary operational challenges. The Expeditionary Navy will gain the capability to print parts, material, and structures in austere environments at remote sites with limited external logistical support to augment the existing supply system, and to bridge gaps and shortfalls keeping personnel and equipment actively engaged in mission execution. This effort will develop and assess technologies for Organizational-Level Maintenance (OM) usage; develop and assess modified COTS and GOTS AdvM equipment, techniques, and procedures for Intermediate-Level Maintenance (IM) usage to mitigate logistics gaps during operational events within the Expeditionary Navy. Development includes evaluation and modification of the Expeditionary Fabrication (EXFAB) concept to meet expeditionary warfighter requirements as detailed in the NECE Advanced Manufacturing Analysis of Alternatives.

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Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603239N / (U)NAVAL CONSTRUCTIO N FORCES	Project (Number/Name) 3444 / Airfield/Port Damage Repair
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will provide required engineer support capability while maximizing the ability to deploy (by minimizing size and weight) and enhancing operator safety (by providing direct operator protection or allowing for remote or autonomous operation).

The results of these efforts will enhance Navy force response plans, and Joint Force Commander's flexibility to deploy and employ from expeditionary airfields, as well as deliver and sustain warfighting capabilities at the point of effect. This includes "right size, just-in-time" technologies that can facilitate both conventional and autonomous rapid assessment, repair, and re-constitution of expeditionary airfields. These efforts to develop technologies supporting NCF's PDR capabilities include just-in-time assessment and rapid repair of piers, quay- walls, fleet moorings, critical expeditionary waterfront facilities and infrastructure, and port facilities above, at, and below the waterline to enable the reviving, re-armament, repair, re- fueling, re-calibration and re-constitution of fleet platforms at Sea Ports of Debarkation (SPODs) available during Major Combat Operations (MCO). FYDP effort involves transitioning these capabilities into a program of record within an existing Table of Allowance (TOA) and Supports NDS requirements of Resilient and Agile Logistics and supplements the Navy's ExADR Program of DMO 38-Operational Logistics allowing dynamic operational maneuverability with both fixed and mobile logistics

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

	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Airfield Damage Repair (ADR)	1.261	0.252	0.936	0.000	0.936
Articles:	-	-	-	-	-
FY 2023 Plans:					
Invest in technologies, materials, and process solutions that facilitate rapid airfield damage repair including saltwater concrete, full-depth reclamation, autonomous airfield inspection and survey, along with continued RDTE to transition Joint Capability Technology Demonstration (JCTD) products.					
- Full-depth Reclamation: Year 2 of 3, effort continues with the integration and validation of commercial roadway pavement reclamation techniques and equipment for military use in the rehabilitation of expeditionary airfields.					
- AoA Technical Gap: Year 2 of 3, effort continues with the integration and optimization of crater damage repair methods and equipment into capability sets for the Naval Construction Forces Expeditionary Rapid Airfield Damage Repair (NCF ExRADR) table of allowance (TOA) and unified facilities criteria (UFC).					
FY 2024 Base Plans:					
- Full-depth Reclamation: Year 3 of 3, effort culminates with data consolidation and analysis from the full-scale test section testing. Final full-depth reclamation process criteria is then developed and readied for transition into Tri-service pavements working group supplemental criteria or unified facilities criteria (UFC).					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>- AoA Technical Gap: Year 3 of 3, effort culminates with the final transition of crater damage repair methods and equipment into capability sets for the Naval Construction Forces Expeditionary Rapid Airfield Damage Repair (NCF ExRADR) table of allowance (TOA) and unified facilities criteria (UFC).</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase of \$0.684 million will support developing the remaining technologies identified in the AoA which was completed end of FY2021.</p>					
<p>Title: Port Damage Repair (PDR)</p> <p align="right">Articles:</p> <p>FY 2023 Plans: Investment in technologies and process solutions that facilitate port damage repair including mini robotic salvage dredge research, expedient pier assessment and repair, quay wall repair technologies, port assessment sensor integration of survey data for real time operational decisions, integration of collected meta data to create 3D virtual assessments.</p> <p>- AoA Technical Gap: Year 3 of 6, effort continues with a solicitation of proposals for the mitigation of identified capability gaps and down selection of proposals informed by operational risk assessments.</p> <p>- Expedient Pier Assessment and Repair: Year 3 of 4, effort continues with full-scale destructive testing of PIER JCTD class IV materials and components to validate working load limits and ability to meet pier side logistics/ seaport-of-debarkation offload requirements.</p> <p>- Quay wall Repair: Year 3 of 3, effort continues with the finalized documentation and transition of recommended quay wall repair equipment and methodologies into the NCF table of allowance and relevant criteria products.</p> <p>- Port Assessment Sensor Integration: Year 2 of 2, effort continues with the demonstration and validation of identified pier/ port survey tools and sensors; culminating in a transition recommendation for the UCT and NCF table of allowance.</p>	3.565	1.125	3.647	0.000	3.647
	-	-	-	-	-

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>- Pillar Training Package & Pier Recon & Assessment Tool (PRAT): Year 1 of 1, effort focuses on providing necessary updates to the PRAT software tool and transitioning the tool for operational use within the NCF.</p> <p>- Expeditionary 3D Virtual Assessments (Scan to Publish): Year 3 of 3, effort culminates with the final documentation and publication of site survey/assessment, tools, processes, and vignettes.</p> <p>FY 2024 Base Plans:</p> <p>- AoA Technical Gap: Year 4 of 6, effort continues with the initiation of selected project proposals. Specific projects include expedient port assessment and analysis tools, e.g. magnetic sensor technology identified to improve the current LIDAR capability which is limited to Level One (superficial) assessments, real-time engineering assessment methodologies that support expeditionary timelines, and additional repair technologies for PDR necessary to meet expedient PDR timeline requirements.</p> <p>- Expedient Construction Barge: Year 1 of 2, effort begins with the identification of modular construction barge platforms/systems, evaluation of alternatives, procurement of prototype platforms, and limited user evaluation of prototype systems in an expeditionary environment.</p> <p>- Aerial Port Assessment System (APAS): Year 1 of 3, effort begins with the identification of relevant commercial technologies to enable rapid autonomous pier condition surveys to assess operational utility of expeditionary and host nation facilities.</p> <p>- PDR Technology Test and Evaluation: Year 1 of 2, effort begins with the development of PDR test and evaluation master plan (TEMP) to include development of Critical Operational Issues (COIs), Measures of Effectiveness (MOEs), Measures of Suitability (MOSs), and Measures of Performance (MOPs). The TEMP will be used to evaluate capability set alterations, improvements, and progress towards meeting required operational capability (ROC) in the projected operational environment (POE).</p> <p>- Expedient Pier Assessment and Repair: Year 4 of 4, effort continues with additional full-scale destructive testing of PIER JCTD class IV materials and components to validate working load limits and ability to meet pier side logistics/seaport-of-debarkation offload requirements. Logistics support and provisioning of components is also completed and transitioned to the program for ongoing support.</p> <p>FY 2024 OCO Plans:</p>					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A					
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increase of \$2.522 million will be used to further define and develop the PDR capability shortfalls defined in the AoA.					
<i>Title:</i> Expeditionary Engineering Materials and Equipment (EEME)	0.200	0.129	0.526	0.000	0.526
<i>Articles:</i>	-	-	-	-	-
<i>FY 2023 Plans:</i> Investment in materials and equipment that facilitate expeditionary battle damage repair and reduce the logistics burden of Class IV construction materials. - ACES JCTD: Year 3 of 3, effort culminates with the integration of the expeditionary automated construction system into an operational prototype for evaluation at the final military utility assessment event. Program deliverables are finalized and readied for transition to program of record.					
<i>FY 2024 Base Plans:</i> - Autonomous Construction Equipment: Year 1 of 3, effort begins with the identification of relevant commercial remote/autonomous construction equipment, e.g. excavators, compact track loaders (CTLs), bulldozers, scrapers, graders; evaluation of alternative systems and assessment of technology readiness levels necessary for integration into the ADR and PDR capability sets. Autonomous construction equipment is a potential force multiplier necessary to mitigate current NCF active/reserve component manpower trends.					
<i>FY 2024 OCO Plans:</i> N/A					
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increase of \$0.397 million will support initiation of the Autonomous Construction Equipment research and development.					
<i>Title:</i> Expeditionary Advance Base Operations (EABO)	0.245	0.200	0.306	0.000	0.306
<i>Articles:</i>	-	-	-	-	-
<i>FY 2023 Plans:</i> In support of the NCF Force Re-design, this Program Element provides for continued investment in Expeditionary Navy table of allowance gap identification, prioritization, and mitigation supporting Distributed					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
<p>Maritime Operations (DMO), Expeditionary Advanced Base Operations (EABO), and Littoral Operations in a Contested Environment (LOCE) in multiple GCC AORs.</p> <p>- Solicitation and Selection of Proposals: Year 1 of 1, effort begins with the development of a call for proposals to address identified ADR/PDR/AdvM capability gaps reflected in current NECC SONs and CNs. Effort then concludes with the selection of proposals that best mitigate capability gaps in the near/long-term.</p> <p>FY 2024 Base Plans: Initiate the proposals selected above utilizing organic resources, other DoD labs and facilities, academia, and appropriate commercial resources.</p> <p>FY 2024 OCO Plans: N/A</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Increase of \$0.106 million will support the initial development activities for the proposed solutions.</p>					
<p>Title: Advanced Manufacturing (AdvM)</p> <p align="right">Articles:</p> <p>FY 2023 Plans: N/A</p> <p>FY 2024 Base Plans: This effort will develop and assess technologies for Organizational-Level Maintenance (OM) usage; develop and assess modified COTS and GOTS AdvM equipment, techniques, and procedures for Intermediate-Level Maintenance (IM) usage to mitigate logistics gaps during operational events within the Expeditionary Navy.</p> <p>- AoA O-Level Technical Gap: Year 1 of 5, effort begins with the identification and assessment of relevant commercial technologies for the mitigation of O-Level maintenance capability and training aid production gaps.</p> <p>- AoA I-Level Technical Gap: Year 1 of 5, effort begins with a solicitation of proposals for the mitigation of identified I-Level maintenance capability gaps and down selection of proposals to produce a prototype in Year 2 informed by operational risk assessments.</p> <p>FY 2024 OCO Plans:</p>	0.000 -	0.000 -	2.406 -	0.000 -	2.406 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
N/A					
<i>FY 2023 to FY 2024 Increase/Decrease Statement:</i> Increase of \$2.406 million will support research to determine employment of new technologies in the expeditionary operational environment with an end goal to reduce operational dependency on supply and logistic systems in austere environments.					
Accomplishments/Planned Programs Subtotals	5.271	1.706	7.821	0.000	7.821

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

N/A

Remarks

D. Acquisition Strategy

The Projects identified in this budget are carefully selected to respond to resiliency considerations of evolving and aging airfields, ports, expeditionary operations, and to facilitate rational risk based decisions and solutions to protect and decrease risk levels for Department of the Navy-critical expeditionary waterfront facilities and infrastructure. The results of these projects will be the development of design and construction criteria and/or components that directly influence Navy-critical expeditionary and waterfront facilities and infrastructure.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Navy **Date:** March 2023

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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Airfield Damage Repair	WR	NAVFAC EXWC : Pt Hueneme, CA	0.240	1.261	Jan 2022	0.252	Dec 2022	0.936	Jan 2024	-		0.936	Continuing	Continuing	Continuing
Port Damage Repair	WR	NAVFAC EXWC : Pt Hueneme, CA	0.681	2.065	Jan 2022	0.330	Dec 2022	2.391	Jan 2024	-		2.391	Continuing	Continuing	Continuing
Port Damage Repair	Various	ERDC : Vicksburg, MS	1.000	1.500	Feb 2022	0.795	Dec 2022	1.256	Jan 2024	-		1.256	Continuing	Continuing	Continuing
Expeditionary Engineering Materials and Equipment	Reqn	NAVFAC EXWC : Pt Hueneme, CA	0.080	0.200	Jan 2022	0.000		0.526	Jan 2024	-		0.526	Continuing	Continuing	Continuing
Expeditionary Engineering Materials and Equipment	Reqn	ERDC : Vicksburg, MS	0.250	0.000		0.129	Dec 2022	0.000		-		0.000	Continuing	Continuing	Continuing
EABO(Expeditionary Advance Base Operations)	Various	NAVFAC EXWC : Pt Hueneme, CA	0.000	0.245	Jan 2022	0.200	Dec 2022	0.306	Jan 2024	-		0.306	Continuing	Continuing	Continuing
Advanced Manufacturing	Various	NAVFAC EXWC : Pt Hueneme, CA	0.000	0.000		0.000		2.406	Feb 2024	-		2.406	Continuing	Continuing	Continuing
Subtotal			2.251	5.271		1.706		7.821		-		7.821	Continuing	Continuing	N/A

Remarks
The increase of \$6.115M is a result of the need to mitigate deficiencies identified in the PDR AoA (completed in May 2022) and re-alignment/initiation of the advanced manufacturing capability set under project 3444.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.251	5.271	1.706	7.821	-	7.821	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Navy		Date: March 2023
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Airfield Damage Repair Group	
Rapid Airfield Material Recycling and Rehabilitation (RAMRR)	
Saltwater Concrete	
AoA Technical Gap	
Autonomous Airfield and Port Inspection	
Port Damage Repair Group	
AoA Technical Gap	
MRSD Testing	
Expedient Pier Assessment and Repair	
Quaywall Repair	
Pillar Trng Packg.& Pier Recon & Assesment Tool (PRAT)	
Aerial Port Assesment System (APAS)	
Port Assessment Process	
Expeditionary 3D Virtual Assessments (Scan to Publish)	
Port Assessment Sensor Integration	
Expeditionary Engineering Materials and Equipment:	
ACES JCTD	
EABO: Test and Evaluation Oversight	
Advanced Manufacturing	
Analysis of Alternatives - Organziation Level Maintenance Technical Gap	

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	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Analysis of Alternatives - Intermediate Level Maintenance Technical Gap	[REDACTED]																											
<i>Expeditionary Advanced Base Operations</i>																												
Test and Evaluation Oversight	[REDACTED]																											
Solicitation and Selection of Proposals	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy		Date: March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Airfield Damage Repair Group</i>				
Rapid Airfield Material Recycling and Rehabilitation (RAMRR)	3	2022	2	2025
Saltwater Concrete	2	2022	2	2023
AoA Technical Gap	3	2022	3	2025
Autonomous Airfield and Port Inspection	1	2024	4	2026
<i>Port Damage Repair Group</i>				
AoA Technical Gap	1	2022	1	2026
MRSD Testing	3	2022	2	2023
Expedient Pier Assessment and Repair	3	2022	2	2025
Quaywall Repair	3	2022	2	2025
Pillar Trng Packg. & Pier Recon & Assesment Tool (PRAT)	1	2023	4	2023
Aerial Port Assesment System (APAS)	2	2024	1	2027
Port Assessment Process	1	2024	4	2026
Expeditionary 3D Virtual Assessments (Scan to Publish)	2	2022	1	2024
Port Assessment Sensor Integration	3	2022	2	2023
<i>Expeditionary Engineering Materials and Equipment:</i>				
ACES JCTD	3	2022	1	2023
EABO: Test and Evaluation Oversight	1	2022	4	2026
<i>Advanced Manufacturing</i>				
Analysis of Alternatives - Organziation Level Maintenance Technical Gap	1	2024	1	2028
Analysis of Alternatives - Intermediate Level Maintenance Technical Gap	1	2024	1	2028
<i>Expeditionary Advanced Base Operations</i>				

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Navy **Date:** March 2023

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603239N / (U)NAVAL CONSTRUCTIO N FORCES	Project (Number/Name) 3444 / Airfield/Port Damage Repair
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Test and Evaluation Oversight	1	2022	1	2026
Solicitation and Selection of Proposals	1	2023	4	2023