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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 2: Applied Research</i>					R-1 Program Element (Number/Name) PE 0602134A / <i>Counter Improvised-Threat Advanced Studies</i>							
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	-	1.927	1.976	-	1.976	-	-	-	-	-	-
CD2: <i>Counter Improvised-Threat Advanced Studies</i>	-	-	1.927	1.976	-	1.976	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This Program Element (PE) executes applied research into novel methods for detecting and defeating Improvised Explosive Devices (IED) through the application of emerging technologies as well as research into emerging IED threats to evaluate potential methods of defeat. The goal of this research is to increase the ability of deployed forces to positively identify IEDs with minimal false alarms and positively neutralize or mitigate the effects of IEDs with minimal collateral damage through the systematic identification and maturation of technologies capable of defeating IEDs.

This PE is executed by the Army Futures Command (AFC) in coordination with the Under Secretary of Defense for Research and Engineering (USD/R&E) and the Defense Threat Reduction Agency (DTRA).

Work in this PE was previously conducted under PE 0602134BR, Improvised Threat Reduction Applied Research.

B. Program Change Summary (\$ in Millions)	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>
Previous President's Budget	0.000	2.000	2.000	-	2.000
Current President's Budget	0.000	1.927	1.976	-	1.976
Total Adjustments	0.000	-0.073	-0.024	-	-0.024
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-0.073			
• Adjustments to Budget Years	-	-	-0.024	-	-0.024

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Army **Date:** May 2021

Appropriation/Budget Activity 2040 / 2	R-1 Program Element (Number/Name) PE 0602134A / <i>Counter Improvised-Threat Advanced Studies</i>	Project (Number/Name) CD2 / <i>Counter Improvised-Threat Advanced Studies</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
<i>CD2: Counter Improvised-Threat Advanced Studies</i>	-	-	1.927	1.976	-	1.976	-	-	-	-	-	-

Note

This Project is a New Start for Fiscal Year 2021 (FY21).

A. Mission Description and Budget Item Justification

This Project researches novel methods for detecting and defeating improvised explosive devices (IED) as well as research into emerging IED threats to evaluate potential methods of defeat of the same.

This Project is executed by the Army Futures Command (AFC) in coordination with the Under Secretary of Defense for Research and Engineering (USD/R&E) and the Defense Threat Reduction Agency (DTRA).

Work in this Project was previously conducted under PE 0602134BR, Improvised Threat Reduction Applied Research.

Work in this Project is related to, and fully coordinated with, PE 0603134A Counter Improvised-Threat Simulation

B. Accomplishments/Planned Programs (\$ in Millions)

Title: Counter IED Emerging Technologies	FY 2020	FY 2021	FY 2022
<p>Description: This effort investigates emerging technologies to include physics, chemistry, biology and computer science to identify applications to detect current and emerging IED threats and defeat their critical components. This effort investigates novel methods and technology solutions for the detection and defeat of IEDs through the systematic identification and maturation of technologies capable of defeating these threats. The goals include increasing the distance for standoff detection, improving the probability of positive identification and reducing the rate of false indications. This effort is informed by technology trends across the Department of Defense and by analysis of IED threats encountered in operational scenarios.</p> <p>FY 2021 Plans: Investigate emerging technologies to include physics, chemistry, biology and computer science to identify novel techniques to detect current and emerging IED threats and defeat their critical components. Evaluate multiple technologies to assess</p>	-	1.927	1.976

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Appropriation/Budget Activity 2040 / 2	R-1 Program Element (Number/Name) PE 0602134A / <i>Counter Improvised-Threat Advanced Studies</i>	Project (Number/Name) CD2 / <i>Counter Improvised-Threat Advanced Studies</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
their ability to counter IED threats in laboratory environments and transition promising technologies to PE 0603134BR Counter Improvised-Threat Simulation, Project CD3 Counter Improvised-Threat Simulation. <i>FY 2022 Plans:</i> Will investigate novel radio frequency (RF), electromagnetic (EM), electro-optical and infrared (EOIR), neutron-based sensing, and other emerging technologies and technology components. Will continue to investigate and develop multiple technologies to assess their ability to counter IED threats in laboratory environments and transition promising technologies to the sister Project, PE 0603134A Counter Improvised-Threat Simulation, Project CD3 Counter Improvised-Threat Simulation. <i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> Funding change reflects planned lifecycle of this effort.			
Accomplishments/Planned Programs Subtotals	-	1.927	1.976

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

N/A

Remarks

D. Acquisition Strategy

N/A