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**Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Army** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / Electronic Warfare Development
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	56.310	59.539	62.426	-	62.426	28.229	8.671	7.902	14.208	0.000	237.285
<i>DX5: Electronic Warfare And Management Tool</i>	-	17.714	23.514	14.437	-	14.437	17.021	2.017	0.000	5.886	0.000	80.589
<i>DX6: Multi-Function Electronic Warfare (MFEW)</i>	-	30.113	30.574	45.791	-	45.791	9.010	4.523	5.745	6.720	0.000	132.476
<i>ET7: Radio Frequency Interference Mitigation</i>	-	0.949	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.949
<i>VS6: Integrated Electronic Warfare Systems</i>	-	7.534	5.451	2.198	-	2.198	2.198	2.131	2.157	1.602	0.000	23.271

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

This program element (PE) encompasses engineering and manufacturing development for tactical Electronic Warfare (EW). The Integrated Electronic Warfare System (IEWS) is a capability set that integrates electronic attack, protect and support functions to dramatically improve the ability to seize, retain, and exploit an advantage within the electromagnetic spectrum (EMS). It is based on a modular, scalable and open architecture to allow Army Brigade Combat Team (BCT) and Joint Force Commander's to tailor capability responses against a variety of EW threats/scenarios.

The IEWS capability set is structured along four program lines of effort: 1) Project DX5 Electronic Warfare Planning and Management Tools (EWPMT), 2) Project DX6 Multi-Function EW (MFEW), 3) Project VS6 Counter Radio-Controlled Improvised Explosive Devices (RCIED) Electronic Warfare (CREW) which provides current defensive electronic attack capability, and 4) Project ET7 Radio Frequency Interference Mitigation (RIM) which resolves radio frequency interference and electromagnetic fratricide and enables electronic warfare and communications compatibility.

Project DX5 - The Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS), EWPMT will provide the ability to conduct remote control & management of Electronic Warfare (EW) assets to execute offensive and defensive Electronic Attack, EW targeting and enable maneuver by synchronizing EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO).

EWPMT is a Mission Command software application that enhances the Cyber Electromagnetic Activities (CEMA) element's ability to plan, coordinate, integrate and synchronize CEMA (Cyber, EW & Electromagnetic Spectrum Management (ESM)) with Mission Command Systems from Joint Task Force (JTF) to Battalion (BN). EWPMT Integrates the Electronic Attack (EA), Electronic Protect (EP), Electronic Warfare Support (ES), and Spectrum Management Operations functions in support of Brigade Combat Team (BCT) and Echelons Above Brigade (EAB) Electronic Warfare and CEMA Planning.

Project DX6 - The Multi-Function Electronic Warfare (MFEW) is a capability set that will provide BCT Commanders with an organic airborne offensive Electronic Warfare (EW) capability. MFEW variants empower Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system, when

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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>
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installed onto the Gray Eagle (GE) Unmanned Aerial System (UAS), will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.

Project ET7 - Radio Frequency Interference Mitigation (RIM) is a cross cutting capability to centrally manage and provide oversight to identify, define, test, and coordinate development of Radio Frequency (RF) interference mitigation material solutions to resolve mutual RF interference and electromagnetic fratricide for Spectrum Dependent Systems (SDS). FY19 is the last year of funding for project ET7.

Project VS6 - Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW), provides protection of ground forces operating in vehicle convoys, single vehicles, and fixed locations in operational theaters, which enables freedom of movement across the depth and breadth of the operational environment. It is programmable with techniques to mitigate emerging threats. In order to keep pace with the threat evolution, development efforts will provide fielded CREW systems as well as other EW systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.

<b>B. Program Change Summary (\$ in Millions)</b>	<b><u>FY 2019</u></b>	<b><u>FY 2020</u></b>	<b><u>FY 2021 Base</u></b>	<b><u>FY 2021 OCO</u></b>	<b><u>FY 2021 Total</u></b>
Previous President's Budget	58.627	70.539	51.711	-	51.711
Current President's Budget	56.310	59.539	62.426	-	62.426
Total Adjustments	-2.317	-11.000	10.715	-	10.715
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-11.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.317	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	10.715	-	10.715

**Change Summary Explanation**

FY21 Increase of \$10,715K fully funds EWPMT CD4 requirements in the amount of \$6,186K and completion of MFEW Air Engineering and Manufacturing Development in the amount of \$4,529K.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
DX5: <i>Electronic Warfare And Management Tool</i>	-	17.714	23.514	14.437	-	14.437	17.021	2.017	0.000	5.886	0.000	80.589
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS), EWPMT will provide the ability to conduct remote control & management of Electronic Warfare (EW) assets to execute offensive and defensive Electronic Attack, EW targeting and enable maneuver by synchronizing EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO).

EWPMT is a Mission Command software application that enhances the Cyber Electromagnetic Activities (CEMA) element's ability to plan, coordinate, integrate and synchronize CEMA (Cyber, EW & Electromagnetic Spectrum Management (ESM)) with Mission Command Systems from Joint Task Force (JTF) to Battalion (BN). EWPMT Integrates the Electronic Attack (EA), Electronic Protect (EP), Electronic Warfare Support (ES), and Spectrum Management Operations functions in support of Brigade Combat Team (BCT) and Echelons Above Brigade (EAB) Electronic Warfare and CEMA Planning.

Justification:  
FY 2021 Base funds in the amount of \$14.437 million will continue Capability Drop 4 (CD4), allow for participation in Soldier Touch Points (STPs) events and evaluations to the maximum extent possible, and fund Increment 1 testing and support activities for the EWPMT program.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> EWPMT	17.714	22.447	14.437
<b>Description:</b> EWPMT is a Mission Command software application that enhances the CEMA element's ability to plan, coordinate, integrate and synchronize CEMA (Cyber, EW & ESM) with Mission Command Systems from Joint Task Force (JTF) to Battalion (BN). EWPMT Integrates the Electronic Attack (EA), Electronic Protect (EP), Electronic Warfare Support (ES) and Spectrum Management Operations functions in support of Brigade Combat Team (BCT) and Echelons Above Brigade (EAB) for Electronic Warfare and CEMA Planning.			
<b>FY 2020 Plans:</b> Complete CD3 testing and deliver CD3 baseline Continue CD4 development, test and support activities			
<b>FY 2021 Plans:</b> CD4 development and EWPMT Increment 1 Test and Evaluation Support (IOT&E) and FDD. Participate in Soldier Touch Points (STPs) events and evaluations.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
Development of Command Post (CP) relevancy.			
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> FY 2021 funding decreases by \$9.063 Million as a result of EWPMT Program efficiencies.			
<b>Title:</b> FY 2020 SBIR/STTR Transfer <b>Description:</b> Funding transferred in accordance with Title 15 USC ?638	-	1.067	-
<b>FY 2020 Plans:</b> Funding transferred in accordance with Title 15 USC ?638 <b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC ?638			
<b>Accomplishments/Planned Programs Subtotals</b>	17.714	23.514	14.437

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• K00002: <i>EW Planning &amp; Management Tools (EWPMT)</i>	4.700	7.568	7.849	-	7.849	0.792	-	-	-	0.000	20.909

**Remarks**  
EWPMT Support which includes New Equipment Training (NET); Interim Contractor Support (ICS); and Program Management Support.

**D. Acquisition Strategy**  
EWPMT is an Automated Information System (AIS) that will follow an evolutionary acquisition strategy using a Capability Drop (CD) construct for rapid development and integration of new Electronic Warfare and Spectrum Management capabilities to pace the near peer threats as well as provide for continuous product improvements in support of Multi-Domain Operations (MDO). EWPMT is modeled primarily after the Incrementally Deployed Software Intensive Program approach found in the DoDI 5000.02.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>
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<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
PMO Staff/Travel	Various	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	12.735	0.098	Apr 2019	0.100	Mar 2020	0.155	Mar 2021	-		0.155	Continuing	Continuing	-
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		1.067		-		-		-	0.000	1.067	-
<b>Subtotal</b>			12.735	0.098		1.167		0.155		-		0.155	Continuing	Continuing	N/A

<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
EMD Contract - EWPMT CD1	C/IDIQ	Raytheon : Fort Wayne, IN	18.200	-		-		-		-		-	0.000	18.200	18.200
EMD Contract - EWPMT CD2	C/IDIQ	Raytheon : Fort Wayne, IN	24.359	-		-		-		-		-	0.000	24.359	24.359
EMD Contract - EWPMT CD3	C/IDIQ	Raytheon : Fort Wayne, IN	19.654	6.726	Nov 2018	-		-		-		-	0.000	26.380	26.373
EMD Contract - EWPMT CD4	C/IDIQ	Raytheon : Fort Wayne, IN	-	5.330	Jul 2019	15.673	Dec 2019	6.940	Dec 2020	-		6.940	0.000	27.943	30.576
FY 2019 SBIR / STTR Transfer	TBD	TBD : TBD	-	0.604		-		-		-		-	0.000	0.604	-
<b>Subtotal</b>			62.213	12.660		15.673		6.940		-		6.940	0.000	97.486	N/A

<b>Support (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
EWPMT Technical and Engineering Support	Option/CPFF	Various : Various	24.973	4.765	Dec 2018	3.517	Dec 2019	4.502	Dec 2020	-		4.502	Continuing	Continuing	-
<b>Subtotal</b>			24.973	4.765		3.517		4.502		-		4.502	Continuing	Continuing	N/A



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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2021 Army</b>			<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>	

Event Name	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
EWPMT Contract																												
Development and Test for CD3																												
Development for CD4 and Test for EWPMT Increment 1																												
Initial Operational Test & Evaluation (IOT&E)																												
Continued EWPMT Development																												
Full Deployment Decision (FDD)																												
Full Operational Capability (FOC)																												
NET/NEF COMPO 1																												
NET/NEF COMPOs 2 & 3																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX5 / <i>Electronic Warfare And Management Tool</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EWPMT Contract	1	2014	4	2023
Development and Test for CD1	4	2014	3	2016
Test CD1 (Government Confidence test)	2	2016	2	2016
Limited Deployment Decision for CD1	4	2016	4	2016
CD1 Fielding	4	2016	3	2018
Initial Operational Capability (IOC)	1	2017	1	2017
Development and Test for CD2	4	2016	4	2018
Development and Test for CD3	3	2018	3	2020
Development for CD4 and Test for EWPMT Increment 1	4	2019	4	2021
Initial Operational Test & Evaluation (IOT&E)	3	2021	4	2021
Continued EWPMT Development	4	2021	2	2023
Full Deployment Decision (FDD)	4	2021	4	2021
Full Operational Capability (FOC)	4	2025	4	2025
NET/NEF COMPO 1	4	2021	3	2025
NET/NEF COMPOS 2 & 3	4	2025	4	2026

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>	-	30.113	30.574	45.791	-	45.791	9.010	4.523	5.745	6.720	0.000	132.476
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

The Multi-Function Electronic Warfare (MFEW) is a capability set that will provide BCT Commanders with an organic airborne offensive Electronic Warfare (EW) capability, which empowers Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system, when installed onto the Gray Eagle (GE) Unmanned Aerial System (UAS), will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.

**Justification:**

FY 2021 Base funding in the amount of \$45.791 million will support MFEW Air Large Engineering and Manufacturing Development (EMD), contractor testing, Gray Eagle integration and air worthiness certification and Government Developmental Testing (DT).

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> Multi-Function Electronic Warfare (MFEW) Air Large	30.091	29.185	45.791
<b>Description:</b> MFEW-Air Large is an airborne Electronic Warfare payload to be integrated onto the Gray Eagle Unmanned Aerial Vehicle to provide offensive Electronic Attack (EA) and Electronic Warfare Support (ES) capability to the BCT.			
<b>FY 2020 Plans:</b> Engineering and Manufacturing Development (EMD) activities and development of EMD systems for test			
<b>FY 2021 Plans:</b> Continue Engineering and Manufacturing Development (EMD) activities, to include 4 EMD articles, platform integration, and conducts developmental testing.			
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> FY 2021 increase due to ramp up and completion of Engineering and Manufacturing Development.			
<b>Title:</b> FY 2018 NDAA SEC 825 MDAP Cost Overrun	0.022	-	-
<b>Title:</b> FY 2020 SBIR/STTR Transfer	-	1.389	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army	<b>Date:</b> February 2020
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<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>
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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2019	FY 2020	FY 2021
<b>Description:</b> Funding transferred in accordance with Title 15 USC ?638			
<b>FY 2020 Plans:</b> Funding transferred in accordance with Title 15 USC ?638			
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC ?638			
<b>Accomplishments/Planned Programs Subtotals</b>	30.113	30.574	45.791

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u> <u>Base</u>	<u>FY 2021</u> <u>OCO</u>	<u>FY 2021</u> <u>Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• B05000: <i>Multi-Function Electronic Warfare (MFEW) Systems</i>	-	-	8.669	-	8.669	19.267	20.137	10.312	-	0.000	58.385

**Remarks**

**D. Acquisition Strategy**  
MFEW Air has employed a tailored acquisition approach to rapidly delivery capability to the field. The MFEW Air Large employed a competitive acquisition approach for the EMD phase of the program. The development is using a tailored acquisition approach to rapidly deliver an initial airborne EW capability to the Army using the Consortium for Command, Control, Communications, and Computer Technologies (C5) Other Transaction Agreement (OTA). Phase 1 will build two (2) MFEW-AL systems to demonstrate select OEA and ES capabilities. Phase 2 will build four (4) EMD systems for testing, evaluation, qualification and certification, verification of performance, and flight testing.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604270A / <i>Electronic Warfare Development</i>				DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>							
Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Office Support - MFEW Air	Various	PM Electronic Warfare & Cyber (PM EW&C) : Aberdeen Proving Ground, MD	1.020	0.676	Jan 2019	0.008	Jan 2020	0.259	Jan 2021	-		0.259	0.000	1.963	-
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		1.389		-		-		-	0.000	1.389	-
<b>Subtotal</b>			1.020	0.676		1.397		0.259		-		0.259	0.000	3.352	N/A
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MFEW OTA Prototype Design&Development Contract	C/FFP	C5 Consortium OTA : Acquisition Contracting Center-New Jersey	18.890	14.137	Feb 2019	-		-		-		-	0.000	33.027	-
Command and Control Development Contract	C/CPFF	EWPMT / APP EW : Aberdeen Proving Ground, MD	0.240	0.217	Apr 2019	-		-		-		-	0.000	0.457	-
MFEW Techniques and risk reduction activities	C/CPFF	Various (JHU, GTRI, MITRE, etc) : Aberdeen Proving Ground, MD	0.750	1.009	Jan 2019	-		-		-		-	0.000	1.759	-
MFEW OTA EMD Contract	C/FFP	C5 Consortium OTA : Acquisition Contracting Center-New Jersey	-	-		24.439	Feb 2020	40.460	Feb 2021	-		40.460	0.000	64.899	-
Grey Eagle Integration	Option/CPFF	General Atomics : San Diego, CA	-	0.972	May 2019	1.289	Jan 2020	0.250	Jan 2021	-		0.250	0.000	2.511	-
<b>Subtotal</b>			19.880	16.335		25.728		40.710		-		40.710	0.000	102.653	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604270A / <i>Electronic Warfare Development</i>				DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>							
Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering - MFEW Air	C/CPFF	AASKI : Aberdeen Proving Ground, MD	2.336	0.414	Dec 2018	0.639	Dec 2019	0.462	Dec 2020	-		0.462	0.000	3.851	-
Matrix Engineering - MFEW Air	Various	Various : Aberdeen Proving Ground, MD	0.588	1.270	Dec 2018	1.192	Dec 2019	0.460	Dec 2020	-		0.460	0.000	3.510	-
Engineering Support Services - MFEW Air	SS/CPFF	TBD : TBD	-	-		-		0.500	Jan 2021	-		0.500	0.000	0.500	-
<b>Subtotal</b>			2.924	1.684		1.831		1.422		-		1.422	0.000	7.861	N/A
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test (DT) / Flight Testing (Air)	TBD	Various : Aberdeen Proving Ground, MD	-	-		-		3.400	Apr 2021	-		3.400	0.000	3.400	-
Test range and test support	Various	Various : Various	-	0.628	Mar 2019	1.618		-		-		-	0.000	2.246	-
Modeling & Simulation / Test Infrastructure	Various	Various : Aberdeen Proving Ground, MD	-	10.790	Jan 2019	-		-		-		-	0.000	10.790	-
<b>Subtotal</b>			-	11.418		1.618		3.400		-		3.400	0.000	16.436	N/A
<b>Project Cost Totals</b>			23.824	30.113		30.574		45.791		-		45.791	0.000	130.302	N/A
<b>Remarks</b>															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>

Event Name	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
MFEW Air OTA Prototype Design&Development	██████████				██████████																							
MFEW Air OTA EMD - Phase 2	██████████				██████████				██████████				██████████															
Developmental Test (DT)/Flight Testing/Airworthiness	██████████				██████████								██████████															
User Assessment	██████████				██████████				██████████																			
Grey Eagle Intergration and Air Worthiness	██████████				██████████				██████████				██████████															
Tailored Milestone C	██████████				██████████				██████████				██████████															
IOT&E	██████████				██████████								██████████															
Gray Eagle A-KIT Production	██████████				██████████				██████████				██████████				██████████				██████████							
MFEW Air Production and Fielding	██████████				██████████				██████████				██████████				██████████				██████████							

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> DX6 / <i>Multi-Function Electronic Warfare (MFEW)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Tailored Milestone B	3	2018	3	2018
MFEW Air OTA Award	4	2018	4	2018
MFEW Air OTA Prototype Design&Development	4	2018	2	2020
MFEW Air OTA EMD - Phase 2	2	2020	4	2022
Developmental Test (DT)/Flight Testing/Airworthiness	1	2022	2	2022
User Assessment	2	2021	2	2021
Grey Eagle Intergration and Air Worthiness	2	2020	4	2022
Tailored Milestone C	3	2021	3	2021
IOT&E	2	2022	3	2022
Gray Eagle A-KIT Production	4	2020	4	2026
MFEW Air Production and Fielding	3	2021	4	2026

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>			<b>Project (Number/Name)</b> ET7 / <i>Radio Frequency Interference Mitigation</i>				
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>ET7: Radio Frequency Interference Mitigation</i>	-	0.949	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.949
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

FY19 is the last year of funding for this project.

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

Radio Frequency Interference Mitigation (RIM) is a cross cutting capability to centrally manage and provide oversight to identify, define, test, and coordinate development of Radio Frequency (RF) interference mitigation material solutions to resolve mutual RF interference and electromagnetic fratricide for Spectrum Dependent Systems (SDS).

Centralized management of RIM offers a holistic approach for identification, system of systems engineering, developmental testing, and maturing of RIM solutions to address current and evolving RF interference issues. User and acquisition communities will synchronize, integrate, and codify RIM requirements to facilitate the cross cutting approach necessary for the efficient procurement of common RIM products. This approach will eliminate the need for separate hardware and platform integration research and development efforts for SDS and platforms. An integrated approach will eliminate the need for separate hardware and platform integration research and development efforts for SDS and platform Program Managers. RIM products are intended to preserve the investment that the Army has made in current Electronic Warfare (EW) and Mission Command Transport SDS and provide a strategy for future efforts for new SDS development with integrated RIM solutions. There is no FY 2020/2021 request.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> RF Interference Mitigation	0.949	-	-
<b>Description:</b> RIM is a System of Systems Enterprise approach that will allow Spectrum Dependent Systems to co-exist with Force Protection assets.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.949	-	-

**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 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> ET7 / <i>Radio Frequency Interference Mitigation</i>

**D. Acquisition Strategy**

Radio Frequency (RF) Interference Mitigation (RIM) will follow a System of Systems enterprise strategy to develop and test hardware solutions such as tunable filters and Interference Cancellers (IC) to address RF interference on Army platforms. Designated platforms will procure, integrate and test RIM solutions with their associated spectrum dependent systems.

The RIM acquisition strategy shifted focus from tunable filter technology to IC technology. The decision to shift focus was a direct result of the S&T community accelerating the technical maturity. IC technology will enhance the warfighters ability to utilize the spectrum compared to tunable filter technology. Additionally, RIM is being leveraged through the U.S. Army Europe (USAREUR) and Cyber Electromagnetic Activities (CEMA) Operational Needs Statement (ONS) and this effort could result in future capabilities.

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> ET7 / <i>Radio Frequency Interference Mitigation</i>
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<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Program Management	MIPR	PM Electronic Warfare & Cyber : APG, MD	0.621	-		-		-		-		-	0.000	0.621	-
<b>Subtotal</b>			0.621	-		-		-		-		-	0.000	0.621	N/A

<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Engineering Development Models	TBD	TBD : TBD	5.133	-		-		-		-		-	0.000	5.133	-
<b>Subtotal</b>			5.133	-		-		-		-		-	0.000	5.133	N/A

<b>Support (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Engineering Support	Allot	Various : Various	2.514	0.949	Nov 2018	-		-		-		-	0.000	3.463	-
<b>Subtotal</b>			2.514	0.949		-		-		-		-	0.000	3.463	N/A

			Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			8.268	0.949	0.000	-	-	-	0.000	9.217	N/A

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2021 Army</b>			<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> ET7 / <i>Radio Frequency Interference Mitigation</i>	

Event Name	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
Development for Interference Cancellation (IC)	[Redacted]																											
Developmental Testing (DT) for IC	Develop IC																											
Development for IC Algorithm	[Redacted]																											
	Develop IC Algorithm																											

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> ET7 / <i>Radio Frequency Interference Mitigation</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development for Interference Cancellation (IC)	1	2018	2	2019
Developmental Testing (DT) for IC	3	2019	4	2019
Development for IC Algorithm	1	2019	4	2019

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 2040 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>				<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
VS6: <i>Integrated Electronic Warfare Systems</i>	-	7.534	5.451	2.198	-	2.198	2.198	2.131	2.157	1.602	0.000	23.271
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW), provides protection of ground forces operating in vehicle convoys, single vehicles, and fixed locations in operational theaters, which enables freedom of movement across the depth and breadth of the operational environment. It is programmable with techniques to mitigate emerging threats. In order to keep pace with the threat evolution, development efforts will provide fielded CREW systems as well as other EW systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.

Justification: FY 2021 Base funding in the amount of \$2.198 million supports the continued development of CREW systems as well as other EW systems with techniques that mitigate the range of threats as required. These development efforts may include development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> IEWS - CREW	7.528	5.204	2.198
<b>Description:</b> The Integrated Electronic Warfare System (IEWS) will provide multiple capabilities, to include Electronic Warfare Planning and Management Tool (EWPMT), Multi-Function EW (MFEW), and Defensive Electronic Attack (DEA). The Army's only current Defensive Electronic Warfare solution is Counter Radio Controlled Improvised Explosive Device (RCIED) Electronic Warfare (CREW).			
<b>FY 2020 Plans:</b> Development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.			
<b>FY 2021 Plans:</b> Continue development of new techniques, integration of existing techniques, and hardware and software development and integration in order to pace the threat.			
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Decrease due to termination of Duke Secondary Unit Upgrade.			
<b>Title:</b> FY 2018 NDAA SEC 825 MDAP Cost Overrun	0.006	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Army		<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>
<b>Title:</b> FY 2020 SBIR/STTR Transfer		-	0.247	-
<b>Description:</b> Funding transferred in accordance with Title 15 USC ?638				
<b>FY 2020 Plans:</b> Funding transferred in accordance with Title 15 USC ?638				
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> Funding transferred in accordance with Title 15 USC ?638				
<b>Accomplishments/Planned Programs Subtotals</b>		7.534	5.451	2.198
<b>C. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				
<b>D. Acquisition Strategy</b>				
Due to change in the Army priorities, previously awarded (FY2016) Indefinite Delivery Indefinite Quantity (IDIQ) contract for RCIED threat changes was stopped Sep 2019 pending Termination For Convenience.				
Continued development of CREW and other EW systems through hardware and software development and integration to pace the threat will leverage Other Government Agencies' competitively awarded contracts and task orders.				

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>
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<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
PMO Staff/Travel for EWPMT	Allot	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	4.956	-		-		-		-		-	0.000	4.956	-
Program and Technical Assistance support	C/CPFF	TBD : Aberdeen Proving Ground, MD	3.789	-		-		-		-		-	0.000	3.789	-
PMO Staff/Travel for CREW	Allot	PM Electronic Warfare & Cyber : Aberdeen Proving Ground, MD	2.554	0.227	Dec 2018	0.099	Dec 2019	0.020	Dec 2020	-		0.020	0.000	2.900	-
FY 2020 SBIR/STTR Transfer	TBD	Various : Various	-	-		0.247		-		-		-	0.000	0.247	-
<b>Subtotal</b>			11.299	0.227		0.346		0.020		-		0.020	0.000	11.892	N/A

<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
EMD Contract - EWPMT	C/CPIF	SOTERA Defense Solutions Herndon, VA : RAYTHEON Fort Wayne, IN	38.318	-		-		-		-		-	0.000	38.318	-
IEWS Engineering and Development	MIPR	I2WD : Aberdeen Proving Ground, MD	5.557	-		-		-		-		-	0.000	5.557	-
Risk Reduction Studies for MFEW	MIPR	Various : Various	7.969	-		-		-		-		-	0.000	7.969	-
Develop CREW H/W and S/W solutions	C/CPFF	SRC, Inc. : Syracuse, NY	20.037	7.096	Nov 2018	-		-		-		-	0.000	27.133	-
Development of H/W and S/W for CREW and other EW systems	SS/CPFF	Various : Various	-	-		4.118	Feb 2020	1.018	Dec 2020	-		1.018	0.000	5.136	-
<b>Subtotal</b>			71.881	7.096		4.118		1.018		-		1.018	0.000	84.113	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Army												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 5				PE 0604270A / <i>Electronic Warfare Development</i>				VS6 / <i>Integrated Electronic Warfare Systems</i>							
Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
MFEW Technical/ Engineering Support - Contractor	C/CPFF	GTRI : Atlanta, GA	2.046	-		-		-		-		-	0.000	2.046	-
Matrix Engineering Support	MIPR	CERDEC : Aberdeen Proving Ground, MD	7.412	0.205	Dec 2018	0.149	Dec 2019	0.215	Dec 2020	-		0.215	0.000	7.981	-
EWPMT Architecture Study	MIPR	Various : Various	1.194	-		-		-		-		-	0.000	1.194	-
Engineering support	C/CPFF	Various : Various	3.207	-		0.838	Dec 2019	0.945	Dec 2020	-		0.945	0.000	4.990	-
FY 2019 MDAP Tax	TBD	FY 2019 Pending Rescission : FY 2019 Pending Rescission	-	0.006		-		-		-		-	0.000	0.006	-
<b>Subtotal</b>			13.859	0.211		0.987		1.160		-		1.160	0.000	16.217	N/A
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
EWPMT Test support	MIPR	Various : TBD	1.096	-		-		-		-		-	0.000	1.096	-
Operational Assessment (OA) of DV4 systems	MIPR	Yuma Proving Ground : Yuma, AZ	1.950	-		-		-		-		-	0.000	1.950	-
Continuous evaluation of CREW Technologies	MIPR	Yuma Proving Ground Yuma, AZ : YPG, AZ	1.718	-		-		-		-		-	0.000	1.718	-
<b>Subtotal</b>			4.764	-		-		-		-		-	0.000	4.764	N/A
<b>Project Cost Totals</b>			101.803	7.534		5.451		2.198		-		2.198	0.000	116.986	N/A
<b>Remarks</b>															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>

Event Name	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
Develop HW and SW solutions for CREW	████████████████				████████████████																							
Secondary Unit Development	████████████████				████████████████																							
Develop HW and SW solutions for CREW and other EW systems	████████████████				████████████████				████████████████				████████████████				████████████████				████████████████							

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 2040 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0604270A / <i>Electronic Warfare Development</i>	<b>Project (Number/Name)</b> VS6 / <i>Integrated Electronic Warfare Systems</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EWPMT Milestone B Decision	3	2013	3	2013
EWPMT Contract	3	2013	4	2014
MFEW Risk Reduction Studies	3	2013	4	2014
Delivery of CREW-2 Duke (DV4) Systems for Development	1	2014	1	2014
Operational Assessment and Engineering test of Duke (DV4) systems	2	2014	4	2014
CREW Relevancy Development Contract Award	2	2016	2	2016
Develop H/W and S/W solutions for CREW	2	2016	2	2020
Force Protection, Technique Development, and SAASM	2	2016	2	2018
Secondary Unit Development	3	2018	4	2019
Develop H/W and S/W solutions for CREW and other EW systems	2	2020	2	2026
Force Protection Assessment	3	2017	3	2017
Implemented Technique Assessment	3	2018	3	2018