

**UNCLASSIFIED**

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

<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 5: System Development &amp; Demonstration (SDD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0305176F / <i>Combat Survivor Evader Locator</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
Total Program Element	-	0.000	0.971	0.000	0.000	0.000	-	-	-	-	-	-
654522: <i>CSAR EMD</i>	-	0.000	0.971	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

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

The Combat Survivor Evader Locator (CSEL) System provides aircrews with end-to-end global satellite secure emergency communication capability during combat and peace-time flying operations. CSEL provides a hand held radio as part of the mandatory aircrew survival gear. CSEL is a joint program (AF, Army, and Navy) and is the DoD program of record for personnel recovery survival radios. CSEL supports four of five Personnel Mission Phases: Report, Locate, Support, and Recover.

A National Security Agency (NSA) Cryptographic Modernization mandate and the Ultra High Frequency Follow-On satellite constellation are at the end of life and are driving upgrades to base stations. This effort includes development to modernize the system to integrate common waveforms, integrate broadcast reception for non-CSEL devices, provide for cryptographic modernization, leverage software defined capabilities based on the FY16 cryptographic study, and to procure intellectual property. CSEL will leverage software defined capabilities to replace the legacy handheld radio with a new device that supports report, locate, and recovery missions. The new device will leverage technological advancements and efficiencies to develop a more intuitive device that enables secure communication between the joint warfighter and rescue support teams. This funding will also be used to perform various studies and analysis in support of the CSEL Enterprise.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver 0305176F weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0305176F. In FY20 \$0M and in FY21 \$0.M was expended for civilian pay expenses in this program element.

In FY2018, PE 0305176F, Combat Survivor Evader Locator efforts were transferred to PE 1203176F, Combat Survivor Evader Locator, due to the creation of a new Major Force Program (MFP) for Space programs. In FY2021, CSEL efforts were transferred back to PE 0305176F to more closely align the program's efforts with a more applicable MFP.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	0.000	0.973	0.000	0.000	0.000
Current President's Budget	0.000	0.971	0.000	0.000	0.000
Total Adjustments	0.000	-0.002	0.000	0.000	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-0.002			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

**Change Summary Explanation**

Funding for FY2018, FY2019, and FY2020 ONLY is aligned under APP3600, BA 05, PE C3176F.

Funding for FY2021 and out is aligned under APP3600, BA 05, PE 0306176F.

Funding from FY2019 to FY2020 (ref: APP3600, BA 05, PE C3176F) is increased by \$1.07M. The increased amount will fund NGCA, and begin development for SHIELD.

Funding from FY2020 to FY2021 is reduced by \$1.03M (ref: APP3600, BA 05, PE 0306176F). This change is driven by nearing the completion of NGCA, and continued development needs of SHIELD.