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Exhibit R-2, RDT&E Budget Item Justification: PB 2025 Air Force **Date:** March 2024

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| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0207325F <i>Joint Air-to-Surface Standoff Missile (JASSM)</i> |
|--|--|

| COST (\$ in Millions) | Prior Years | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total | FY 2026 | FY 2027 | FY 2028 | FY 2029 | Cost To Complete | Total Cost |
|--|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | 482.581 | 123.852 | 132.937 | 183.532 | 0.000 | 183.532 | 41.017 | 17.941 | 21.858 | 22.289 | 225.769 | 1,251.776 |
| 675356: <i>JASSM Extended Range (JASSM-ER)</i> | 482.581 | 123.852 | 132.937 | 183.532 | 0.000 | 183.532 | 41.017 | 17.941 | 21.858 | 22.289 | 225.769 | 1,251.776 |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | - | - |

Program MDAP/MAIS Code: 555

A. Mission Description and Budget Item Justification

The Joint Air-to-Surface Standoff Missile (JASSM) family of missiles includes: JASSM Baseline (JASSM-BL/AGM-158A) and JASSM Extended Range (JASSM-ER/AGM-158B, AGM-158B-2, AGM-158B-3, and AGM-158D). JASSM-ER provides a long range, conventional air-to-surface, autonomous, precision-guided, low observable, standoff cruise missile compatible with fighter and bomber aircraft. JASSM-ER provides the capability to attack a variety of high value fixed or relocatable targets with precision, through preplanned missions or target-of-opportunity, deeper into enemy territory than JASSM-BL, all while minimizing the threat to launch aircraft. Aircraft integration of JASSM-ER/AGM-158B is complete on the B-1, F-15E, F-16, B-2, and B-52. Threshold aircraft is the B-1 and Objective aircraft are F-15E, F-16, B-52, B-2, and F-35.

The AGM-158A, AGM-158B, and AGM-158B-2 are fielded. The AGM-158B-3 and AGM-158D are in development and will gradually insert into the production line as the new missile builds are approved and ready. Missiles accepted by the Air Force will not be returned for modification to the newest variant.

Threats to JASSM survivability are being rapidly developed and fielded by peer-to-peer adversaries. JASSM continued development is critical to maintaining day one war capability and to fulfill Combatant Commanders Operational Plan objectives. Continued development enhances capability and provides operational flexibility against current and projected threats. This is accomplished by evaluating high payoff technology development, performing risk reduction activities, and investigating new variants and/or alternate missions that may use JASSM attributes. To maximize effectiveness of existing inventory and address findings from the field, the Air Force also develops, tests, and fields improvements via software upgrades into fielded missiles and/or hardware upgrades inserted into the production line.

The AGM-158B-2 is an upgrade to the existing JASSM-ER/AGM-158B, incorporating multiple development initiatives to respond to rapidly changing threats. The AGM-158B-2 replaces obsolete components and provides a new electronic fuze, a new Global Positioning System (GPS) receiver, an upgraded Missile Control Unit (MCU), and enhanced software. The AGM-158B-2 has begun a gradual production cut-in starting in Lot 19/FY21 funding year. The AGM-158B-3 provides M-code capability and has begun a gradual production cut-in starting in Lot 22/FY24 funding year. The AGM-158D provides Weapon Data Link (WDL) capability to re-target the missile, post-launch, against relocatable or higher priority targets during mission execution. The AGM-158D has begun a gradual production cut-in starting in Lot 22/ FY24 funding year.

Test assets encompass AGM-158B in prior, and AGM-158B-2 and AGM-158D in FY23-25.

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This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY23, 0.760M was allocated for civilian pay expenses in this program element and in FY24, 1.360M is forecasted for civilian pay expenses in this program element.

The FY25 funding request was reduced by \$5.965 million to account for the availability of prior year execution balances.

Implements tenets of Open, Agile, and Digital acquisition for any new subsystem hardware or software development. Integrates the system in weapon portfolio tradespace studies by conducting trade studies, system engineering, test activities, and system modeling and simulation. Builds and refines a mission modeling framework by incorporating higher-fidelity weapon system designs and updates to the threat landscape to conduct ongoing assessment of weapon system performance against the authoritative threat. Leverages common component development, in collaboration with other weapon systems, to reduce redundant costs between systems with similar subsystems requirements. Invests in analytical, data management, digital environments, networks, facilities, and security infrastructure upgrades supporting development of this program's capabilities, while leveraging DoD and DAF enterprise IT solutions.

This requirement supports performance of a full financial audit as required by title 10 U.S.C. Chapter 9A, Sec 240-D.

Funding may be used to address Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

| B. Program Change Summary (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 Base | FY 2025 OCO | FY 2025 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 117.198 | 132.937 | 57.141 | 0.000 | 57.141 |
| Current President's Budget | 123.852 | 132.937 | 183.532 | 0.000 | 183.532 |
| Total Adjustments | 6.654 | 0.000 | 126.391 | 0.000 | 126.391 |
| • Congressional General Reductions | 0.000 | 0.000 | | | |
| • Congressional Directed Reductions | 0.000 | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | 0.000 | 0.000 | | | |
| • Congressional Directed Transfers | 0.000 | 0.000 | | | |
| • Reprogrammings | 10.000 | 0.000 | | | |
| • SBIR/STTR Transfer | -3.346 | 0.000 | | | |
| • Other Adjustments | 0.000 | 0.000 | 126.391 | 0.000 | 126.391 |

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Change Summary Explanation

FY25: FY23 Service Cost Position (SCP) and following Non-Advocate Cost Assessment (NACA) reflect updated Air Combat Command (ACC) requirement for an improved AGM-158D JASSM variant and an escalated timeline to a Milestone C decision. Increases are for new hardware and software, internal and external reconfiguration, weight reduction, and increased testing requirements arising from these changes.

FY23: SBIR Reduction of \$3.346M. BTR increase of \$10.000M to help fund an increase in the Contractor's projected cost of the WDL radios to facilitate expedited testing schedule.

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

| | FY 2023 | FY 2024 | FY 2025 |
|---|---------|---------|---------|
| <p>Title: Warfighting Capability Enhancement</p> <p>Description: Design and development of software and mission planning changes to ensure the missile maintains operational effectiveness in classified scenarios.</p> <p>FY 2024 Plans: Continue flight tests and update classified software accordingly based on flight test results. Continue modification of classified software to enable the missile to maintain operational effectiveness in classified scenarios. FY24 includes completion of 54.0.02 software build and associated flight tests for verification of system updates.</p> <p>FY 2025 Plans: Continue lab development, lab/flight testing and update classified software accordingly based on test results. Continue modification of classified software to enable the missile to maintain operational effectiveness in classified scenarios. FY25 will include agile C++ missile operational flight program releases in the 54.0.xx series software family and associated testing for verification of system updates.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding decreased due to the initial release of the 54.0.xx series software family.</p> | 26.310 | 30.124 | 28.500 |
| <p>Title: Advanced Survivability, Integration, and Test</p> <p>Description: This effort includes development, integration and testing and will continue to enhance missile survivability through subsystem updates including cyber security implementation. The AGM-158B-2 will include a new Electronic Safe and Arm Fuze (ESAF), JASSM Anti-Jam Global Positioning System (GPS) Receiver with Selective Availability Anti-Spoofing Module (JAGR-S V5), an upgraded Missile Control Unit (MCU), Gigabit Ethernet Connector, and enhanced C++ software. This missile variant leverages LRASM coatings, Power Converter Assembly (PCA), Aft Cover and Power and Engine Control Unit (PECU) for improved production commonality.</p> <p>FY 2024 Plans:</p> | 23.614 | 15.244 | 0.000 |

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| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i> | | R-1 Program Element (Number/Name) PE 0207325F <i>Joint Air-to-Surface Standoff Missile (JASSM)</i> | | |
| C. Accomplishments/Planned Programs (\$ in Millions) | | FY 2023 | FY 2024 | FY 2025 |
| Continue and finalize developmental testing for AGM-158B-2 which will include full release missions. Additional efforts to support this development will include program protection and cyber security efforts in support of IATT and ATO requirements. FY 2025 Plans: Development effort will be complete resulting in production of a fully qualified AGM-158B-2. FY 2024 to FY 2025 Increase/Decrease Statement: Funding decreased due to conclusion of AGM-158B-2 Qualification and Production cut-in activities and completion of development test activities. | | | | |
| Title: Weapon Data Link (WDL) Description: This effort includes development of the Weapon Data Link (WDL), as well as integration and testing efforts. The WDL allows warfighters to retarget the weapons via line-of-sight and beyond-line-of-sight, allowing the missile to attack relocatable and/or time sensitive targets post aircraft release. The WDL program is designed to use an open-system architecture standard with outside communication nodes. The WDL effort reflected in PB24 consisted of the addition of a radio to the existing AGM-158B-2/3 variant. As of PB25, the JPO received additional requirements from ACC resulting in a new AGM-158D JASSM variant and driving a significant increase in the level of effort required to deliver capability. The scope increase includes antenna development and integration, fuel tank redesign and integration, terminal sensor integration, development and testing of C2 capability and 158D-specific C++ software, weight reduction, a complete test plan, and an expedited schedule to meet FY27 need. FY 2024 Plans: Continued development effort to include Preliminary Design review and Critical Design review. Procurement of long lead hardware required to support FY25 test events. Begin subsystem hardware testing and demonstrations. FY 2025 Plans: Continue sub-system and system-level hardware demonstrations and qualification. Begin system level testing and qualification activities required for flight testing that begins in FY25. FY25 Funding (\$150.550M) is comprised of the WDL contract (\$136.587M), Government Test support (\$7.852M), and Program Management Administration (\$6.111M). FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to the requirement to ramp up of test and evaluation efforts in support FY27 production readiness. | | 71.043 | 82.083 | 150.550 |
| Title: Other Development/Safety/Survivability Description: This system improvement program (SIP) focuses on maintaining and upgrading capability and includes development, integration, and testing and will continue to enhance missile survivability through subsystem updates, including cyber security implementation. The SIP will explore and exploit new form, fit, function hardware to maximize missile performance and address newly matured capabilities and emerging threats. These updates will be incorporated via engineering change | | 2.885 | 5.486 | 4.482 |

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| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0207325F <i>Joint Air-to-Surface Standoff Missile (JASSM)</i> |
|--|--|

| C. Accomplishments/Planned Programs (\$ in Millions) | FY 2023 | FY 2024 | FY 2025 |
|--|----------------|----------------|----------------|
| <p>proposals (ECPs). Potential efforts could include development and integration of advanced Precision, Navigation, and Timing (PNT) capabilities (e.g. Global Positioning System (GPS), non-GPS, optical, passive, active, etc.), evaluations (study analysis), survivability enhancements, safety certifications, Intelligent Test Instrumentation Kit (iTik) Warhead Replacement, flight testing, and Diminishing Manufacturing Sources and Material Shortage (DMSMS). A GPS Military (M) Code receiver is being developed to enable the missile to meet National Defense Authorization Act requirements.</p> <p>FY 2024 Plans: Continue evaluation activity addressing JASSM's obsolescence plan. Directed activities to include safety and survivability studies. Continue GNC and autopilot software allocations and updates.</p> <p>FY 2025 Plans: Continue evaluation activity addressing JASSM's obsolescence plan. Directed activities to include safety and survivability studies. Continue GNC effort and autopilot software allocations and updates.</p> <p>FY 2024 to FY 2025 Increase/Decrease Statement: Funding increased due to ongoing iTik Warhead Replacement requirement and continued Diminishing Manufacturing Sources and Material Shortage.</p> | | | |
| Accomplishments/Planned Programs Subtotals | 123.852 | 132.937 | 183.532 |

| D. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
|--|----------------|----------------|-------------------------------|------------------------------|--------------------------------|----------------|----------------|----------------|----------------|-----------------------------------|-------------------|
| <u>Line Item</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> <u>Base</u> | <u>FY 2025</u> <u>OCO</u> | <u>FY 2025</u> <u>Total</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>Cost To</u> <u>Complete</u> | <u>Total Cost</u> |
| • MPAF 02 0207325F: JASSM | 834.971 | 1,685.668 | 825.051 | - | 825.051 | 821.193 | 829.091 | 850.810 | 867.157 | 0.000 | 6,713.941 |

Remarks

E. Acquisition Strategy
The JASSM Acquisition Strategy was amended and approved on September 8, 2017. This amendment enables the JASSM program to introduce upgrades which ensure its viability as the threat environment evolves. All current development contracts use a Cost Plus type contract.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2025 Air Force **Date:** March 2024

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0207325F / Joint Air-to-Surface Standoff Missile (JASSM) | Project (Number/Name) 675356 / JASSM Extended Range (JASSM-ER) |
|--|---|--|

| Product Development (\$ in Millions) | | | | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 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 | | | |
| Warfighting Capability Enhancement | SS/CPAF | Lockheed Martin : Orlando, FL | 83.826 | 26.310 | Nov 2022 | 30.124 | Nov 2023 | 28.500 | Nov 2024 | - | | 28.500 | 38.040 | 206.800 | 208.920 |
| Advanced Survivability, Integration, and Test | SS/CPFF | Lockheed Martin : Orlando, FL | 132.032 | 23.614 | Nov 2022 | 15.244 | Nov 2023 | 0.000 | Dec 2024 | - | | 0.000 | 0.000 | 170.890 | 179.591 |
| Weapon Data Link | SS/CPFF | Various : Orlando, FL | 40.282 | 67.338 | Dec 2022 | 76.989 | Dec 2023 | 136.587 | Nov 2024 | - | | 136.587 | 442.238 | 763.434 | 763.434 |
| Other Development/Safety/Survivability | Various | Lockheed Martin : Orlando, FL | 177.571 | 2.885 | Mar 2023 | 5.486 | Mar 2024 | 4.482 | Feb 2025 | - | | 4.482 | 0.000 | 190.424 | 225.745 |
| Subtotal | | | 433.711 | 120.147 | | 127.843 | | 169.569 | | - | | 169.569 | 480.278 | 1,331.548 | N/A |

| Support (\$ in Millions) | | | | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 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 | | | |
| Support | C/CPAF | Not specified. : TBD | 0.250 | 2.695 | Mar 2023 | 2.094 | | - | | - | | - | 0.000 | 5.039 | - |
| Subtotal | | | 0.250 | 2.695 | | 2.094 | | - | | - | | - | 0.000 | 5.039 | N/A |

| Test and Evaluation (\$ in Millions) | | | | FY 2023 | | FY 2024 | | FY 2025 Base | | FY 2025 OCO | | FY 2025 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 | | | |
| Government Test Support. Includes flight test equipment, targets, 96th Test Wing and Range Support, AEDC | Various | 96 TW, Eglin AFB : TBD | 38.920 | - | | - | | 7.852 | Feb 2025 | - | | 7.852 | 0.000 | 46.772 | - |
| Subtotal | | | 38.920 | - | | - | | 7.852 | | - | | 7.852 | 0.000 | 46.772 | N/A |

Remarks
-Arnold Engineering Development Complex (AEDC)

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| Exhibit R-4, RDT&E Schedule Profile: PB 2025 Air Force | | Date: March 2024 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0207325F / Joint Air-to-Surface Standoff Missile (JASSM) | Project (Number/Name) 675356 / JASSM Extended Range (JASSM-ER) |

| FY 2023 | | | | FY 2024 | | | | FY 2025 | | | | FY 2026 | | | | FY 2027 | | | | FY 2028 | | | | FY 2029 | | | |
|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
| 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 |

| RDT&E Schedule Details | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Warfighter Capability Enhancement | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Advanced Survivability, Integration, and Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weapon Data Link | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diminishing Manufacture Sources and Obsolescence Evaluation/Development | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2025 Air Force | | Date: March 2024 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0207325F / Joint Air-to-Surface Standoff Missile (JASSM) | Project (Number/Name) 675356 / JASSM Extended Range (JASSM-ER) |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>RDT&E Schedule Details</i> | | | | |
| Warfighter Capability Enhancement | 1 | 2023 | 4 | 2029 |
| Advanced Survivability, Integration, and Test | 1 | 2023 | 3 | 2024 |
| Weapon Data Link | 1 | 2023 | 4 | 2026 |
| Diminishing Manufacture Sources and Obsolescence Evaluation/Development | 1 | 2023 | 4 | 2029 |