

UNCLASSIFIED

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

| | |
|---|---|
| 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 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> |
|---|---|

| 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 | 48.243 | 45.853 | 58.449 | 59.776 | - | 59.776 | 49.056 | 37.339 | 36.970 | 37.711 | Continuing | Continuing |
| 3348: <i>DAIRCM Development</i> | 48.243 | 45.853 | 58.449 | 59.776 | - | 59.776 | 49.056 | 37.339 | 36.970 | 37.711 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

This element includes development of electronic warfare systems for the United States Navy (USN) and United States Marine Corps (USMC) assault aircraft. This includes the development and testing of advanced infrared countermeasures systems for emerging threats and emergency contingencies for Aircraft Survivability Equipment (ASE) suite integration. This program develops integrated hardware/software solutions that link on-board integrated Aircraft Survivability Equipment (iASE) with platform mission planning/information systems. IASE includes Infrared (IR), Hostile Fire Indication, and Laser Warning Sensors as well as Countermeasures Dispensing Systems (CMDS) and expendables. This program also adopts future multi-band, networking capabilities to facilitate real-time transfer of threat information, and off-board queuing and control of onboard sensors. DAIRCM studies and evaluates current and future aircraft threats, makes modeling and simulation for improved countermeasure capabilities, develops, tests and provides test equipment to address new and emerging threats. DAIRCM develops improved aircraft survivability of Department of Navy (DoN) assault aircraft in complex terrain for worldwide deployment.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES because it includes all efforts necessary to evaluate integrated technologies, representative models or prototype systems in a high fidelity and realistic operating environment.

| B. Program Change Summary (\$ in Millions) | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 47.278 | 68.346 | 60.448 | - | 60.448 |
| Current President's Budget | 45.853 | 58.449 | 59.776 | - | 59.776 |
| Total Adjustments | -1.425 | -9.897 | -0.672 | - | -0.672 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | -9.897 | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | -1.425 | 0.000 | | | |
| • Program Adjustments | 0.000 | 0.000 | -0.652 | - | -0.652 |
| • Rate/Misc Adjustments | 0.000 | 0.000 | -0.020 | - | -0.020 |

Change Summary Explanation

FY 2019 RDT&E funding completed JUONS testing and begin risk reduction efforts to incorporate lessons learned from the JUONS.

UNCLASSIFIED

| | | |
|---|---|----------------------------|
| Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy | | Date: February 2020 |
| 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 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> | |
| FY 2020 RDT&E to correct Joint Urgent Operational Need Statement (JUONS) testing deficiencies and award DAIRCM primary HW Development. | | |
| FY 2020 RDT&E Risk Reduction continues until Engineering & Manufacturing Development contract award (Changed 1QFY20 to 3QFY20). UH-1Y is the focus platform for initial development through Critical Design Review, leveraging risk reduction efforts to support integrating the system under glass. Concurrently developing interface controls and integration plans for platforms AH-1Z, MH-60S, and MH-60R to speed platform integration and test. | | |
| Summary of changes: -DAIRCM Capability Development Document (CDD) extended to Q1 FY24 to align with entrance at acquisition post Milestone B (MS B); CDD finalized prior to MS C (1Q2024) -DAIRCM MSC Decision updated from 2Q2023 to 3Q2024 due to delay in completion of JUONS and align with DAIRCM Engineering Manufacturing and Development (EMD) Contract Award (3Q2020) | | |
| The below schedule updates due to delay in completion of JUONS and align with DAIRCM EMD Contract Award: -DAIRCM SRR 2 changed from 2Q2020-3Q2020 to 1Q2021-1Q2021 -DAIRCM SFR changed from 3Q2020-3Q2020 to 2Q2021-2Q2021 -DAIRCM PDR changed from 4Q2020-4Q2020 to 3Q2021-3Q2021 -DAIRCM CDR changed from 3Q2021-3Q2021 to 2Q2022-2Q2022 -DAIRCM H1 Integration Testing changed from 1Q2022-4Q2022 to 3Q2023-4Q2023 -Added DAIRCM Development Test 1Q2023-3Q2024 -DAIRCM TRR changed from 1Q2023-1Q2023 to 3Q2023-3Q2023 -DAIRCM Integrated Test & Evaluation changed from 1Q2023-4Q2024 to 3Q2023-1Q2025 -DAIRCM Operation Assessment changed from 4Q2024-4Q2024 to 2Q2025-2Q2025 -DAIRCM LRIP 1 Contract Award changed from 2Q2023-2Q2023 to 3Q2024-3Q2024 -Changed DAIRCM Risk Reduction Delivery Orders from Production Milestones to Systems Development and updates End to reflect second delivery order awarded in December 2019: changed 1Q2019-1Q2020 to 1Q2019-1Q2021. -Changed DAIRCM Engineering Manufacturing and Development (EMD) Contract Award from Production Milestones to Systems Development and updated award date from 1Q2020-1Q2020 to 3Q2020-3Q2020. -Added Engineering Development Model (EDM) and Production Representative Model (PRM) deliveries to schedule details. | | |

UNCLASSIFIED

| | | | | | | | | | | | | |
|--|--------------------|----------------|----------------|---------------------|---|----------------------|----------------|----------------|--|----------------------------|-------------------------|-------------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy | | | | | | | | | | Date: February 2020 | | |
| Appropriation/Budget Activity 1319 / 4 | | | | | R-1 Program Element (Number/Name) PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> | | | | Project (Number/Name) 3348 / <i>DAIRCM Development</i> | | | |
| 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 |
| 3348: <i>DAIRCM Development</i> | 48.243 | 45.853 | 58.449 | 59.776 | - | 59.776 | 49.056 | 37.339 | 36.970 | 37.711 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

The AN/AAQ-45 Distributed Aperture Infrared Countermeasures (DAIRCM) system consists of three major components: Missile Warning Sensors, processor, and inexhaustible countermeasures. DAIRCM interfaces with the platform aircraft and provides signals to onboard Aircraft Survival Equipment (ASE). DAIRCM includes the development and testing of advanced infrared countermeasures systems for emerging threats and emergency contingencies for ASE suite integration. This program also adopts future multi-band, networking capabilities to facilitate real-time transfer of threat information, and off-board queuing and control of onboard sensors as well as studies and evaluations of current and future aircraft threats, modeling and simulation for improved countermeasure capabilities, and development and testing and test equipment to address new and emerging threats. The projects in this element improve the aircraft survivability of Department of Navy (DoN) assault aircraft in complex terrain for worldwide deployment.

FY 2019 RDT&E funding required to complete JUONS testing and began developing design considerations for the future DAIRCM solution. The Risk reduction efforts evaluated technical opportunities to reduce weight, increase effectiveness, determine suitability lessons learned from the JUONS approach options to improve situational awareness.

FY 2020 RDT&E funding required for resolution of JUONS test deficiencies, complete Quick Reaction Assessment and for continuation of the risk reduction to prepare for the contract award, development of the Government tracking software, development of (under glass) integrated hardware/software solutions that link on-board integrated Aircraft Survivability Equipment (iASE). DAIRCM Engineering and Manufacturing Development (EMD) Contract award in 3Q20 will start the preparation for System Requirements Review 2 and System Functional Review with the prime contractor. Continue studies and evaluations of current and future aircraft threats, modeling and simulation for improved countermeasure capabilities, and development and testing and test equipment to address new and emerging threats, which include sharing of testing opportunities within DoD.

FY21: Complete Preliminary Design Review. Development to support Critical Design Review(CDR) in 2Q2022. Initiate modeling and simulations to support CDR. Complete size, weight, and power analysis to support integration with platforms. Examine long lead Engineering Development Models (EDM) and Production Representative Models (PRM) supply sources to reduce supply risk for platform integration test and evaluation. Complete B-Kit preliminary development to support contractor developmental testing.

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

| | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total |
|----------------------------------|----------------|----------------|---------------------|--------------------|----------------------|
| Title: DAIRCM Development | 45.853 | 58.449 | 59.776 | 0.000 | 59.776 |
| Articles: | - | - | - | - | - |

UNCLASSIFIED

| | | |
|--|---|--|
| Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy | | Date: February 2020 |
| Appropriation/Budget Activity 1319 / 4 | R-1 Program Element (Number/Name) PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> | Project (Number/Name) 3348 / <i>DAIRCM Development</i> |

| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each) | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| <p><i>FY 2020 Plans:</i> Continue Risk Reduction efforts to support DAIRCM design reviews. Award EMD contract. Evolve functional specs into product documentation for H-1 A-Kits (Fiber Optic Cable Assembly) and DAIRCM B-Kits. Conduct H-1 size, weight, power cooling analysis to support integrated DAIRCM system. Demonstrate prototype DAIRCM under glass solution.</p> <p><i>FY 2021 Base Plans:</i> Conduct H-1 size, weight, power cooling analysis to support integrated DAIRCM system. Demonstrate prototype DAIRCM under glass solution. Complete PDR. Update government software algorithm to support development and test. Evaluate DAIRCM supply chain and other logistics requirements.</p> <p><i>FY 2021 OCO Plans:</i> N/A</p> <p><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i> FY20 - FY21 H-1 Operational Flight Program Development decreased to align with H-1 platform focus for DAIRCM development. FY20 - FY21 Increased Primary HW Dev DAIRCM.</p> | | | | | |
| Accomplishments/Planned Programs Subtotals | 45.853 | 58.449 | 59.776 | 0.000 | 59.776 |

| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
|--|----------------|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| Line Item | 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 |
| • APN/0576: <i>Assault DIRCM</i> | 9.820 | 0.000 | 0.000 | - | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 708.400 | 790.916 |

Remarks

D. Acquisition Strategy
 The Distributed Aperture Infrared Countermeasures (DAIRCM) acquisition approach is a single step acquisition to full capability. It replaces existing AN/AAR-47 UV Threat Warning System - providing an inexhaustible countermeasure with improved 2-color IR Threat Warning system and growth capability to meet future design

UNCLASSIFIED

| | | |
|--|---|--|
| Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy | | Date: February 2020 |
| Appropriation/Budget Activity 1319 / 4 | R-1 Program Element (Number/Name) PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> | Project (Number/Name) 3348 / <i>DAIRCM Development</i> |

improvements and combat advanced threats. It leverages JUONs capability, cooperation between Government laboratories and industry partners to grow into an integrated capability that meets the key performance parameters. DAIRCM contract strategy is to award a development cost contract in FY20; a separate LRIP contract Milestone C award planned 3QFY24.

UNCLASSIFIED

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

| | | |
|--|---|--|
| Appropriation/Budget Activity 1319 / 4 | R-1 Program Element (Number/Name) PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> | Project (Number/Name) 3348 / <i>DAIRCM Development</i> |
|--|---|--|

| 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 |
| Primary HW Dev JUONS | C/CPFF | DRS : Dallas, TX | 19.445 | 30.069 | Jan 2019 | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |
| Primary HW Dev JUONS | C/CPFF | Daylight Solutions : San Diego, CA | 7.417 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |
| H-60 Operational Flight Program Dev | C/CPFF | Lockheed Martin : Owego, NY | 5.000 | 0.000 | | 5.000 | Mar 2020 | 0.000 | Mar 2021 | - | | 0.000 | Continuing | Continuing | Continuing |
| H-1 Operational Flight Program Dev | C/CPFF | Northrop Grumman : Woodland Hills, CA | 0.000 | 0.000 | | 5.000 | Mar 2020 | 2.000 | Mar 2021 | - | | 2.000 | Continuing | Continuing | Continuing |
| Govt Eng Support | WR | NAWCAD : Patuxent River, MD | 3.338 | 0.000 | | 5.500 | Oct 2019 | 5.500 | Oct 2020 | - | | 5.500 | Continuing | Continuing | Continuing |
| Govt Eng Support | WR | FRC : Jacksonville, FL | 0.549 | 0.000 | | 0.123 | Nov 2019 | 0.150 | Nov 2020 | - | | 0.150 | Continuing | Continuing | Continuing |
| Govt Software Eng Support | WR | NAWCWD : PT Mugu | 2.000 | 0.000 | | 3.170 | Nov 2019 | 3.201 | Nov 2020 | - | | 3.201 | Continuing | Continuing | Continuing |
| Aircraft Integration | WR | FRC East : Cherry Point, NC | 0.400 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |
| Govt Software Eng Support | WR | NRL : Washington, DC | 0.260 | 5.713 | Jan 2019 | 1.385 | Nov 2019 | 3.500 | Nov 2020 | - | | 3.500 | Continuing | Continuing | Continuing |
| Govt Integrated Logistic Support | C/CPFF | ENGILITY : Chantilly, VA | 0.000 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | Continuing |
| Primary HW Dev DAIRCM | C/CPFF | DRS Sysco : Melbourne, FL | 0.000 | 0.000 | | 31.003 | Jun 2020 | 37.980 | Sep 2021 | - | | 37.980 | Continuing | Continuing | Continuing |
| Subtotal | | | 38.409 | 35.782 | | 51.181 | | 52.331 | | - | | 52.331 | Continuing | Continuing | N/A |

Remarks
 (1) FY20 Primary HW Dev JUONS (DRS: Dallas TX and Daylight Solutions: San Diego, CA) form a single business entity under DRS Sysco, Melbourne, FL for DAIRCM Primary HW Development; FY20 Risk Reduction Award of \$3.798 in Dec 19; DAIRCM EMD Contract Award 3Q2020.
 (2) FY20 Govt Software Eng Support (NAWCWD) increase to support under glass software requirements, design, and demonstration.
 (3) FY21 Govt Software Eng Support (NRL) increased to support algorithm software support development test and platform integration.

UNCLASSIFIED

| | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy | | | | | | | | | | | Date: February 2020 | | | | |
| Appropriation/Budget Activity 1319 / 4 | | | | | | R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM) | | | | | Project (Number/Name) 3348 / DAIRCM Development | | | | |

| 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 |
| Govt Integrated Logistic Support | WR | Fleet Readiness Depot : Jacksonville, FL | 0.000 | 0.000 | | 0.123 | Oct 2019 | 0.150 | Oct 2020 | - | | 0.150 | Continuing | Continuing | Continuing |
| Logistic Deliverables | SS/CPFF | RIAC : Ft Belvoir, VA | 0.322 | 0.000 | | 0.125 | Nov 2019 | 0.150 | Nov 2020 | - | | 0.150 | Continuing | Continuing | Continuing |
| ESOH support | WR | NAWC WD : China lake | 0.123 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.123 | - |
| Integrated Logistic Support | C/CPAF | Wyle Laboratories : Lexington Park, MD | 0.300 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 0.300 | 0.300 |
| Comercial Shipping TAC code | TBD | Various : Various | 0.017 | 0.000 | | 0.130 | Nov 2019 | 0.150 | Nov 2020 | - | | 0.150 | Continuing | Continuing | Continuing |
| ESOH Support | SS/CPFF | RIAC : Ft. Belvoir, VA | 0.000 | 0.000 | | 0.065 | Nov 2019 | 0.070 | Nov 2020 | - | | 0.070 | Continuing | Continuing | Continuing |
| Govt Integrated Logistics Support | WR | NAWCAD : Patuxent River, MD | 0.000 | 0.000 | | 0.555 | Oct 2019 | 0.600 | Oct 2020 | - | | 0.600 | Continuing | Continuing | Continuing |
| Subtotal | | | 0.762 | 0.000 | | 0.998 | | 1.120 | | - | | 1.120 | Continuing | Continuing | N/A |

Remarks

(1) FY20 - FY21 Support lines increase to support design reviews, test, and integration for EDM design.

| 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 |
| Govt T&E Support | WR | NAWCAD : Patuxent River, MD | 0.865 | 7.558 | Dec 2018 | 1.999 | Oct 2019 | 1.900 | Oct 2020 | - | | 1.900 | Continuing | Continuing | Continuing |
| Govt T&E Support | WR | NAWCWD : China Lake, CA | 0.000 | 0.019 | Nov 2018 | 0.216 | Nov 2019 | 0.250 | Nov 2020 | - | | 0.250 | Continuing | Continuing | Continuing |
| Flight Test/Live Fire | WR | USA DPG : Various | 0.000 | 0.798 | Mar 2019 | 0.405 | Mar 2020 | 0.200 | Mar 2021 | - | | 0.200 | Continuing | Continuing | Continuing |
| T& E Support | C/CPFF | GWEF : Eglin AFB, FL | 0.826 | 0.359 | Feb 2019 | 0.100 | Feb 2020 | 0.200 | Feb 2021 | - | | 0.200 | Continuing | Continuing | Continuing |
| Govt T&E Support | WR | COTF : Norfolk, VA | 0.100 | 0.893 | Jun 2019 | 0.208 | Nov 2019 | 0.250 | Nov 2020 | - | | 0.250 | Continuing | Continuing | Continuing |
| Govt T&E Support | WR | CRANE : CRANE | 0.350 | 0.350 | Jun 2019 | 0.500 | Jan 2020 | 0.350 | Jan 2021 | - | | 0.350 | Continuing | Continuing | Continuing |

UNCLASSIFIED

| | | | | | | | | | | | | | | |
|---|--|--|--|--|---|--|--|--|--|---|----------------------------|--|--|--|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy | | | | | | | | | | | Date: February 2020 | | | |
| Appropriation/Budget Activity 1319 / 4 | | | | | R-1 Program Element (Number/Name) PE 0604272N / Tact Air Dir Infrared CM (TADIRCM) | | | | | Project (Number/Name) 3348 / DAIRCM Development | | | | |

| 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 | |
| OCO Flight & Live Fire Test | WR | Various : Various | 2.877 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.877 | Continuing | |
| OCO Govt T&E Support | WR | Vasrious : Various | 2.370 | 0.000 | | 0.000 | | 0.000 | | - | | 0.000 | 0.000 | 2.370 | 0.450 | |
| Subtotal | | | 7.388 | 9.977 | | 3.428 | | 3.150 | | - | | 3.150 | Continuing | Continuing | N/A | |

Remarks
(1) FY20 - Govt T&E Support (NAWCAD, Patuxent River, MD) increase to correspond to development schedule reviews, test and integration.

| 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 | |
| Contractor Mgmt Support | C/CPFF | Amelex : California, MD | 0.000 | 0.000 | | 0.500 | Oct 2019 | 0.550 | Oct 2020 | - | | 0.550 | Continuing | Continuing | Continuing | |
| Contractor Eng Support | C/CPFF | Engility : Lexington Park, MD | 0.864 | 0.000 | | 0.711 | Oct 2019 | 0.750 | Oct 2020 | - | | 0.750 | Continuing | Continuing | Continuing | |
| Travel | WR | NAVAIR Various : Patuxent River, MD | 0.119 | 0.094 | Oct 2018 | 0.308 | Oct 2019 | 0.350 | Oct 2020 | - | | 0.350 | Continuing | Continuing | Continuing | |
| Govt PM support | WR | NAWCAD : Patuxent River, MD | 0.499 | 0.000 | | 1.090 | Oct 2019 | 1.250 | Oct 2020 | - | | 1.250 | Continuing | Continuing | Continuing | |
| Govt Eng Support | WR | NSWC : Dahlgren, VA | 0.014 | 0.000 | | 0.020 | Nov 2019 | 0.025 | Nov 2020 | - | | 0.025 | Continuing | Continuing | Continuing | |
| Eng Support | C/CPFF | DCS : Bethesda, MD | 0.188 | 0.000 | | 0.213 | Feb 2020 | 0.250 | Feb 2021 | - | | 0.250 | Continuing | Continuing | Continuing | |
| Subtotal | | | 1.684 | 0.094 | | 2.842 | | 3.175 | | - | | 3.175 | Continuing | Continuing | N/A | |

Remarks
FY20 - FY21 Govt PM support (NAWCAD) increase to correspond to management to design reviews, test and integration and to support Earned Value Management.

| | Prior Years | FY 2019 | FY 2020 | FY 2021 Base | FY 2021 OCO | FY 2021 Total | Cost To Complete | Total Cost | Target Value of Contract | |
|----------------------------|--------------------|----------------|----------------|---------------------|--------------------|----------------------|-------------------------|-------------------|---------------------------------|-----|
| Project Cost Totals | | 48.243 | 45.853 | 58.449 | 59.776 | - | 59.776 | Continuing | Continuing | N/A |

UNCLASSIFIED

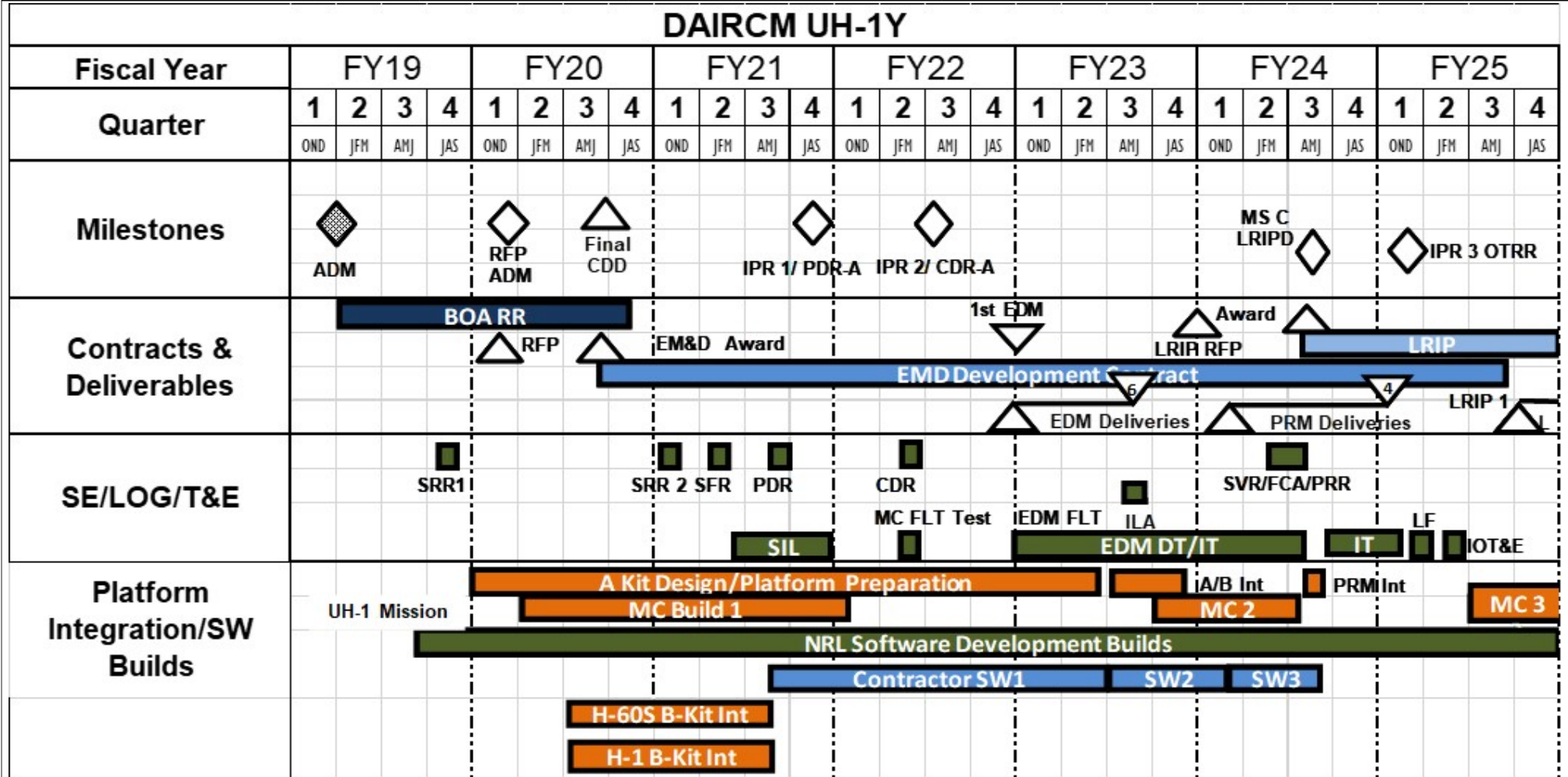
Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy

Date: February 2020

Appropriation/Budget Activity
1319 / 4

R-1 Program Element (Number/Name)
PE 0604272N / Tact Air Dir Infrared CM
(TADIRCM)

Project (Number/Name)
3348 / DAIRCM Development



UNCLASSIFIED

| | | |
|---|---|--|
| Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy | | Date: February 2020 |
| Appropriation/Budget Activity 1319 / 4 | R-1 Program Element (Number/Name) PE 0604272N / <i>Tact Air Dir Infrared CM (TADIRCM)</i> | Project (Number/Name) 3348 / <i>DAIRCM Development</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| DAIRCM | | | | |
| Acquisition Milestones: DAIRCM Capability Development Document (CDD): Schedule Detail | 4 | 2020 | 4 | 2020 |
| Acquisition Milestones: DAIRCM MSC Decision: Schedule Detail | 3 | 2024 | 3 | 2024 |
| Systems Development: DAIRCM SRR 2: Schedule Detail | 1 | 2021 | 1 | 2021 |
| Systems Development: DAIRCM SFR: Schedule Detail | 2 | 2021 | 2 | 2021 |
| Systems Development: DAIRCM PDR: Schedule Detail | 3 | 2021 | 3 | 2021 |
| Systems Development: DAIRCM CDR: Schedule Detail | 2 | 2022 | 2 | 2022 |
| Systems Development: DAIRCM Risk Reduction BOA: Schedule Detail | 1 | 2019 | 4 | 2020 |
| Systems Development: DAIRCM Engineering Manufacturing and Development (EMD) Contract Award: Schedule Detail | 3 | 2020 | 3 | 2020 |
| Test and Evaluation: DAIRCM Development Test: Schedule Detail | 1 | 2023 | 3 | 2024 |
| Test and Evaluation: DAIRCM Integrated Test & Evaluation: Schedule Detail | 3 | 2023 | 1 | 2025 |
| Test and Evaluation: DAIRCM Operation Assessment: Schedule Detail | 2 | 2025 | 2 | 2025 |
| Production Milestones: DAIRCM LRIP 1 Contract Award: Schedule Detail | 3 | 2024 | 3 | 2024 |
| Deliveries: EMD Hardware Deliveries: Schedule Detail | 1 | 2023 | 3 | 2023 |
| Deliveries: Production Representatives Models (PRMS): Schedule Detail | 1 | 2024 | 1 | 2025 |