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| Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force | | | | | | | | | | Date: March 2014 | | |
| Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P) | | | | | R-1 Program Element (Number/Name) PE 0207455F I Three Dimensional Long-Range Radar (3DELRR) | | | | | | | |
| COST (\$ in Millions) | Prior Years | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO # | FY 2015 Total | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Cost To Complete | Total Cost |
| Total Program Element | 0.000 | - | 54.191 | 88.825 | - | 88.825 | 98.250 | 68.613 | 24.790 | 35.734 | - | 370.403 |
| 646002: Three Dimensional Expeditionary Long Range Radar | 0.000 | - | 54.191 | 88.825 | - | 88.825 | 98.250 | 68.613 | 24.790 | 35.734 | - | 370.403 |
| Quantity of RDT&E Articles | 0.000 | - | 3.000 | - | - | - | - | - | - | - | | |
| MDAP/MAIS Code: 393 | | | | | | | | | | | | |
| # The FY 2015 OCO Request will be submitted at a later date. | | | | | | | | | | | | |
| Note | | | | | | | | | | | | |
| In FY 2014, Project 646002, Three-Dimensional Expeditionary Long-Range Radar (3DELRR), efforts were transferred from PE 0604283F, Battle Management Command and Control (BMC2) Sensor Development, Project 646002, in order to provide this program its own Program Element. | | | | | | | | | | | | |
| A. Mission Description and Budget Item Justification | | | | | | | | | | | | |
| Beginning in FY 2014, PE 0207455F funds the development of the Three-Dimensional Expeditionary Long-Range Radar (3DELRR) which will replace the current legacy AN/TPS-75 radar. 3DELRR will be the principal United States Air Force (USAF) long-range, ground-based sensor for detecting, identifying, tracking, and reporting aerial targets for the Joint Force Air Component Commander (JFACC) through the Theater Air Control System (TACS). 3DELRR will respond to the operational need to detect and report highly maneuverable, small radar cross section targets to enable battlefield awareness while at the same time mitigating the reliability, maintainability, and sustainability issues plaguing the AN/TPS-75 radar system. 3DELRR will provide air controllers with a precise, real-time air picture of sufficient quality to conduct control of individual aircraft under a wide range of environmental and operational conditions. It will replace the aging USAF AN/TPS-75 radar system as the AN/TPS-75 is incapable of detecting some current and emerging threats. In addition, as the AN/TPS-75 is reaching the end of its service life, it is more difficult and costly to maintain. The United States Marine Corps (USMC) is considering 3DELRR as a potential replacement for the AN/TPS-59, at the end of its service life, to support the Marine Air-Ground Task Force (MAGTF) Commander through the Marine Air Command and Control System (MACCS). | | | | | | | | | | | | |
| 3DELRR will address system sustainability, transportability and operational availability shortfalls while providing long-range surveillance, detection, and tracking of Air Breathing Targets (ABTs) and, potentially, Theater Ballistic Missiles (TBMs). This capability will support the USAF contribution to the primary roles of the Airspace Control Authority (ACA) and the Area Air Defense Commander (AADC) and enhance the USAF contributions to the Integrated Air and Missile Defense (IAMD) mission area. 3DELRR will contribute to the USAF critical role in the United States Government/DoD efforts to build partnership capacity via the Defense Exportability Features (DEF) pilot program. 3DELRR will provide the USAF Control and Reporting Center (CRC) and, if purchased by the USMC, the Composite Tracking Network (CTN), with real-time data to display air activity. | | | | | | | | | | | | |
| FY 2014 completes the Pre-EMD period of the TD phase. The EMD phase of the 3DELRR program begins after a MS-B decision in FY 2014. Acquisition activities for the EMD phase within the FY 2014 timeframe include, but are not limited to; MS-B preparation, MS-B decision, EMD contract award, Integrated Baseline Review (IBR), | | | | | | | | | | | | |

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| Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P) | | R-1 Program Element (Number/Name) PE 0207455F I Three Dimensional Long-Range Radar (3DELRR) | | | | | |
| Critical Design Review (CDR), test planning/preparation and fabrication/test of system components. A CDR is conducted during this timeframe to ensure the program has properly matured the system design and is postured for successful development of three Production Representative Units (PRUs). Activities also include studies and analyses to support both current program planning and execution and future program planning. | | | | | | | |
| This program is in Budget Activity 04, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment. Transition to Budget Activity 05 occurs after MS-B decision approval to enter the EMD Phase. | | | | | | | |
| B. Program Change Summary (\$ in Millions) | | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO | FY 2015 Total | |
| Previous President's Budget | | - | 70.160 | 69.533 | - | 69.533 | |
| Current President's Budget | | - | 54.191 | 88.825 | - | 88.825 | |
| Total Adjustments | | - | -15.969 | 19.292 | - | 19.292 | |
| • Congressional General Reductions | | - | -0.236 | | | | |
| • Congressional Directed Reductions | | - | -15.733 | | | | |
| • Congressional Rescissions | | - | - | | | | |
| • Congressional Adds | | - | - | | | | |
| • Congressional Directed Transfers | | - | - | | | | |
| • Reprogrammings | | - | - | | | | |
| • SBIR/STTR Transfer | | - | - | | | | |
| • Other Adjustments | | - | - | 19.292 | - | 19.292 | |
| Change Summary Explanation | | | | | | | |
| In FY14 the Congression Directed Reduction was due to program delays | | | | | | | |
| In FY14 the BY1 Other Adjustment was for program decrease (Sequestration) | | | | | | | |
| C. Accomplishments/Planned Programs (\$ in Millions) | | | | | FY 2013 | FY 2014 | FY 2015 |
| Title: Technology Development (TD)/EMD Phases | | | | | - | 41.970 | 80.722 |
| Description: Technology Development (TD)/EMD efforts associated with delivering a new long-range ground-based sensor. | | | | | | | |
| FY 2013 Accomplishments: N/A | | | | | | | |
| FY 2014 Plans: Complete a limited competition source selection to award a single contract for the EMD Phase, MS-B preparation, and MS-B decision. Begin EMD Phase after MS-B decision. Acquisition activities for the EMD phase include, but are not limited to, Integrated Baseline Review (IBR), Delta Preliminary Design Review (PDR), Critical Design Review (CDR), test planning /preparation and | | | | | | | |

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force | | Date: March 2014 | | |
| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i> | | R-1 Program Element (Number/Name) PE 0207455F <i>I Three Dimensional Long-Range Radar (3DELRR)</i> | | |
| C. Accomplishments/Planned Programs (\$ in Millions) | | FY 2013 | FY 2014 | FY 2015 |
| fabrication/test of system components /subsystems. A CDR is conducted during this timeframe to ensure the program has properly matured the system design and is postured for successful development of 3 Production Representative Units (PRUs). Activities also include studies and analyses to support both current program planning and execution and future program planning. FY 2015 Plans: Acquisition activities for the EMD phase will include, but are not limited to, test planning /preparation, fabrication/test of system components /subsystems, continued efforts to insure the program has properly matured the system design and is postured for successful completion of 3 Production Representative Units (PRUs) to be delivered in FY16. Activities will also include studies and analyses to support both current program planning and execution and future program planning. | | | | |
| Title: Test and Evaluation Support Description: Test and Evaluation Support FY 2013 Accomplishments: N/A FY 2014 Plans: Continue test and evaluation support activities for development of the test strategy and test related documentation, planning of future developmental test and evaluation events, information assurance planning, supporting contractor testing, and participation in technical and test-related working groups. FY 2015 Plans: Will Continue test and evaluation support activities for development of the test strategy and test related documentation, planning of future developmental test and evaluation events, information assurance planning, supporting contractor testing, and participation in technical and test-related working groups. | | - | 2.229 | 1.507 |
| Title: Systems Engineering/Technical Support Description: Systems Engineering/Technical Support FY 2013 Accomplishments: N/A FY 2014 Plans: | | - | 9.992 | 6.596 |

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force | | | | | | | | | | Date: March 2014 | | |
| Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P) | | | | | R-1 Program Element (Number/Name) PE 0207455F I Three Dimensional Long-Range Radar (3DELRR) | | | | | | | |
| C. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | | | FY 2013 | FY 2014 | FY 2015 |
| Continue Engineering and Manufacturing efforts to further mature program technologies and manufacturing capabilities. Document and monitor changes to the program that could affect the system baseline. Support reliability growth efforts during contractor test and continue to identify, monitor, and mitigate technical program risks. | | | | | | | | | | | | |
| FY 2015 Plans: Will continue Engineering and Manufacturing efforts to further mature program technologies and manufacturing capabilities. Document and monitor changes to the program that could affect the system baseline. Support reliability growth efforts during contractor test and continue to identify, monitor, and mitigate technical program risks. | | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | | | | - | 54.191 | 88.825 |
| D. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | | |
| Line Item | FY 2013 | FY 2014 | FY 2015 Base | FY 2015 OCO | FY 2015 Total | FY 2016 | FY 2017 | FY 2018 | FY 2019 | Cost To Complete | Total Cost | |
| • 1 - RDTE: BA04: PE 0604283F: Three Dimensional Long Range Radar | 91.702 | - | - | - | - | - | - | - | - | - | 120.442 | |
| • 2 - OPAF: BA04: Line Item # 646002: Three Dimensional Long Range Radar | - | - | - | - | - | - | - | 73.393 | 162.656 | Continuing | Continuing | |
| Remarks | | | | | | | | | | | | |
| E. Acquisition Strategy Three Dimensional Expeditionary Long-Range Radar (3DELRR) will provide full capability via limited competition to further advance Command and Control capabilities supporting Theater Battle Management. | | | | | | | | | | | | |
| F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission. | | | | | | | | | | | | |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force | | | | | | | | | | | | Date: March 2014 | | | |
| Appropriation/Budget Activity 3600 / 4 | | | | | | R-1 Program Element (Number/Name) PE 0207455F / Three Dimensional Long-Range Radar (3DELRR) | | | | | | Project (Number/Name) 646002 / Three Dimensional Expeditionary Long Range Radar | | | |
| Product Development (\$ in Millions) | | | | FY 2013 | | FY 2014 | | FY 2015 Base | | FY 2015 OCO | | FY 2015 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 |
| EMD Phase | C/FPIF | TBD : TBD, | 0.000 | - | | 41.970 | Jun 2014 | 79.691 | Oct 2014 | - | | 79.691 | 125.265 | 246.926 | 265.000 |
| Subtotal | | | 0.000 | - | | 41.970 | | 79.691 | | - | | 79.691 | 125.265 | 246.926 | 265.000 |
| Support (\$ in Millions) | | | | FY 2013 | | FY 2014 | | FY 2015 Base | | FY 2015 OCO | | FY 2015 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 |
| System Engineering - A | SS/CPFF | MIT/Lincoln Laboratory : Lexington, MA | 0.000 | - | | 1.266 | Jan 2014 | 0.997 | Oct 2014 | - | | 0.997 | Continuing | Continuing | TBD |
| System Engineering - C | SS/CPFF | Carnegie Mellon University : Pittsburgh, PA | 0.000 | - | | 0.575 | Dec 2013 | - | | - | | - | Continuing | Continuing | TBD |
| Government Furnished Equipment (GFE) | TBD | Various : TBD, | 0.000 | - | | 1.587 | Sep 2014 | 0.034 | Oct 2014 | - | | 0.034 | - | 1.621 | TBD |
| Subtotal | | | 0.000 | - | | 3.428 | | 1.031 | | - | | 1.031 | - | - | - |
| Test and Evaluation (\$ in Millions) | | | | FY 2013 | | FY 2014 | | FY 2015 Base | | FY 2015 OCO | | FY 2015 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 |
| 46th Test Wing/Other Test Agencies | Various | Various : Various, | 0.000 | - | | 2.229 | Oct 2013 | 1.507 | Oct 2014 | - | | 1.507 | 1.028 | 4.764 | TBD |
| Subtotal | | | 0.000 | - | | 2.229 | | 1.507 | | - | | 1.507 | 1.028 | 4.764 | - |
| Management Services (\$ in Millions) | | | | FY 2013 | | FY 2014 | | FY 2015 Base | | FY 2015 OCO | | FY 2015 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 Administration | Various | Various : Various, | 0.000 | - | | 6.564 | Oct 2013 | 6.596 | Oct 2014 | - | | 6.596 | 87.865 | 101.025 | TBD |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Air Force | | | | | | | | | | | | Date: March 2014 | | |
| Appropriation/Budget Activity 3600 / 4 | | | | | | R-1 Program Element (Number/Name) PE 0207455F / <i>Three Dimensional Long-Range Radar (3DELRR)</i> | | | | Project (Number/Name) 646002 / <i>Three Dimensional Expeditionary Long Range Radar</i> | | | | |

| Management Services (\$ in Millions) | | | | FY 2013 | | FY 2014 | | FY 2015 Base | | FY 2015 OCO | | FY 2015 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 | Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal | | | 0.000 | - | | 6.564 | | 6.596 | | - | | 6.596 | | 87.865 | 101.025 | - |

| | Prior Years | FY 2013 | | FY 2014 | | FY 2015 Base | | FY 2015 OCO | | FY 2015 Total | Cost To Complete | Total Cost | Target Value of Contract |
|----------------------------|-------------|---------|--|---------|--|--------------|--|-------------|--|---------------|------------------|------------|--------------------------|
| Project Cost Totals | 0.000 | - | | 54.191 | | 88.825 | | - | | 88.825 | - | - | - |

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force

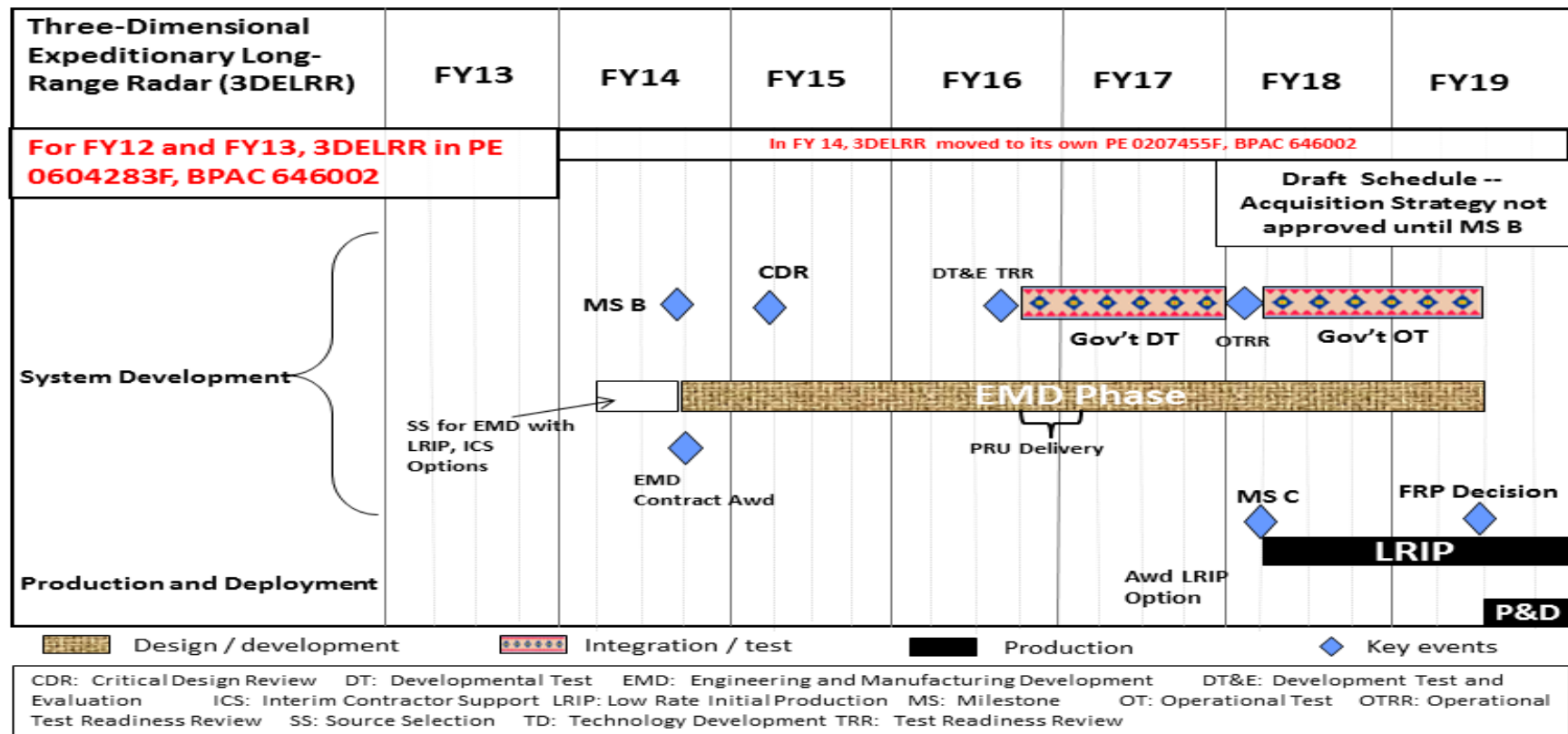
Date: March 2014

Appropriation/Budget Activity
3600 / 4

R-1 Program Element (Number/Name)
PE 0207455F / Three Dimensional Long-Range Radar (3DELRR)

Project (Number/Name)
646002 / Three Dimensional Expeditionary Long Range Radar

3DELRR Program Schedule



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| Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force | | | Date: March 2014 |
| Appropriation/Budget Activity 3600 / 4 | R-1 Program Element (Number/Name) PE 0207455F / <i>Three Dimensional Long-Range Radar (3DELRR)</i> | Project (Number/Name) 646002 / <i>Three Dimensional Expeditionary Long Range Radar</i> | |

Schedule Details

| Events | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Source Selection for EMD and LRIP Contract | 1 | 2014 | 3 | 2014 |
| Milestone B | 3 | 2014 | 3 | 2014 |
| EMD Contract Award | 3 | 2014 | 3 | 2014 |
| EMD Phase | 3 | 2014 | 2 | 2019 |
| Critical Design Review (CDR) | 1 | 2015 | 1 | 2015 |
| Developmental Test & Evaluation Test Readiness Review | 3 | 2016 | 3 | 2016 |
| Production Representative Units Delivery | 3 | 2016 | 1 | 2017 |
| Government Developmental Test | 3 | 2016 | 4 | 2017 |
| Operational Test Readiness Review (OTRR) | 1 | 2018 | 1 | 2018 |
| Government Operational Test | 2 | 2018 | 2 | 2019 |
| Milestone C | 2 | 2018 | 2 | 2018 |
| Low Rate Initial Production (LRIP) | 2 | 2018 | 4 | 2019 |
| Full Rate Production Decision | 2 | 2019 | 2 | 2019 |
| Production and Deployment Phase | 3 | 2019 | 4 | 2019 |