

# UNCLASSIFIED

| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force   |                 |         |                      |              |  |               |         |         |         | DATE: April 2013 |                  |            |
|---|-----------------|---------|----------------------|--------------|--|---------------|---------|---------|---------|------------------|------------------|------------|
| APPROPRIATION/BUDGET ACTIVITY<br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development |                 |         |                      |              | R-1 ITEM NOMENCLATURE<br>PE 0305182F: Spacelift Range System (SPACE) |               |         |         |         |                  |                  |            |
| COST (\$ in Millions)   | All Prior Years | FY 2012 | FY 2013 <sup>#</sup> | FY 2014 Base | FY 2014 OCO <sup>##</sup>  | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018          | Cost To Complete | Total Cost |
| Total Program Element   | -               | 9.245   | 8.760                | 13.345       | -  | 13.345        | 13.630  | 9.171   | 10.607  | 10.798           | Continuing       | Continuing |
| 674137: Launch and Test Range System (LTRS) Modernization   | -               | 9.245   | 8.760                | 13.345       | -  | 13.345        | 13.630  | 9.171   | 10.607  | 10.798           | Continuing       | Continuing |
| Quantity of RDT&E Articles  |                 | 0       | 0                    | 0            |  | 0             | 0       | 0       | 0       | 0                |                  |            |

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

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

The Eastern Range (ER) at Patrick Air Force Base (AFB)/Cape Canaveral Air Force Station, FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS), also known as the Launch and Test Range System (LTRS). The ER and WR provide tracking, telemetry, communications, flight safety, and other capabilities to enable: national security, civil, and commercial space launches; ballistic missile and missile defense test launches; and aeronautical and guided weapons tests. Decreasing reliability of aging range systems leads to higher operations and maintenance costs and increased risk of launch delays.

The AF will address range deficiencies in FY14 via multiple contracts, including the LTRS Integrated Support Contract (LISC), a command destruct modernization contract, small business set-aside contracts for ER and WR network modernization, and the Systems Engineering and Integration (SE&I) Contract. As a follow-on to the Spacelift Range System Contract (SLRSC) which runs through FY13, the AF will award LISC as a consolidated sustainment, operations, and maintenance contract in FY14. LISC will provide interface systems engineering, technical studies, and requirements analysis to integrate future maintenance and sustainment upgrades with modernization efforts. Also, the separate Systems Engineering and Integration (SE&I) contract supporting the program management office will expand efforts to provide systems engineering and integration support for future modernization efforts, in terms of system baselines, configurations, and architectures. These efforts will comply with OSD policies and standards for interface with IT systems.

In addition to these system upgrades, the Standard Space Trainer program will provide a complementary training application for the Spacelift Ranges, incorporating Range Modernization functionality, as part of the common platform for all space system operational training.

All of these upgrades to fielded systems at operating ranges are categorized as Budget Activity 7, Operational Systems Development.

**UNCLASSIFIED**

|   |         |  |              |                  |               |         |
|---|---------|--|--------------|------------------|---------------|---------|
| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force   |         |  |              | DATE: April 2013 |               |         |
| APPROPRIATION/BUDGET ACTIVITY<br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development   |         | R-1 ITEM NOMENCLATURE<br>PE 0305182F: Spacelift Range System (SPACE) |              |                  |               |         |
| B. Program Change Summary (\$ in Millions)  | FY 2012 | FY 2013  | FY 2014 Base | FY 2014 OCO      | FY 2014 Total |         |
| Previous President's Budget   | 9.877   | 8.760  | 13.345       | -                | 13.345        |         |
| Current President's Budget  | 9.245   | 8.760  | 13.345       | -                | 13.345        |         |
| Total Adjustments   | -0.632  | 0.000  | 0.000        | -                | 0.000         |         |
| • Congressional General Reductions  | -       | 0.000  |              |                  |               |         |
| • Congressional Directed Reductions   | -       | 0.000  |              |                  |               |         |
| • Congressional Rescissions   | 0.000   | 0.000  |              |                  |               |         |
| • Congressional Adds  | -       | 0.000  |              |                  |               |         |
| • Congressional Directed Transfers  | -       | 0.000  |              |                  |               |         |
| • Reprogrammings  | 0.000   | 0.000  |              |                  |               |         |
| • SBIR/STTR Transfer  | -0.632  | 0.000  |              |                  |               |         |
| • Other Adjustments   | 0.000   | 0.000  | 0.000        | -                | 0.000         |         |
| C. Accomplishments/Planned Programs (\$ in Millions)  |         |  |              | FY 2012          | FY 2013       | FY 2014 |
| Title: Range Modernization (SLRSC)  |         |  |              | 6.172            | 6.210         | 0.000   |
| Description: SLRSC continues systems engineering, special studies, and requirements analysis for modernization of selected telemetry, radar, and command destruct instrumentation site systems through FY13. Subsequently, the AF will accomplish systems engineering, special studies, and requirements analysis via the Launch and Test Range System Integrated Support Contract (LISC) to integrate its range operations, maintenance, and sustainment (OM&S) functions with future range modernization efforts. |         |  |              |                  |               |         |
| FY 2012 Accomplishments:<br>SLRSC continued systems engineering, special studies, and requirements analysis for modernization of selected command destruct, radar, and telemetry instrumentation site systems.  |         |  |              |                  |               |         |
| FY 2013 Plans:<br>SLRSC will complete systems engineering, special studies, and requirements analysis for modernization of selected command destruct, radar, and telemetry instrumentation site systems.  |         |  |              |                  |               |         |
| FY 2014 Plans:<br>N/A   |         |  |              |                  |               |         |
| Title: LISC Systems Engineering and Tech Support  |         |  |              | 0.000            | 0.000         | 1.900   |
| Description: Beginning in FY14, the AF will accomplish interface systems engineering, special studies, and requirements analysis via the Launch and Test Range System Integrated Support Contract (LISC) to integrate its future range operations, maintenance,   |         |  |              |                  |               |         |

**UNCLASSIFIED**

|  |  |  |                |                |
|--|--|--|----------------|----------------|
| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Air Force   |  | <b>DATE:</b> April 2013  |                |                |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i>   |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0305182F: <i>Spacelift Range System (SPACE)</i> |                |                |
| <b>C. Accomplishments/Planned Programs (\$ in Millions)</b>  |  | <b>FY 2012</b>   | <b>FY 2013</b> | <b>FY 2014</b> |
| and sustainment (OM&S) functions with future range modernization efforts. Additionally, LISC will integrate its future OM&S functions with the primary systems engineering and integration contract supporting the program management office.  |  |  |                |                |
| <b>FY 2012 Accomplishments:</b><br>N/A   |  |  |                |                |
| <b>FY 2013 Plans:</b><br>N/A   |  |  |                |                |
| <b>FY 2014 Plans:</b><br>LISC will initiate interface systems engineering, special studies, and requirements analysis to integrate its future range operations, maintenance, and sustainment (OM&S) functions with future range modernization efforts. Additionally, LISC will integrate its future OM&S functions with the primary systems engineering and integration contract supporting the program management office.   |  |  |                |                |
| <b>Title:</b> Systems Engineering and Integration  |  | 2.717  | 2.157          | 6.566          |
| <b>Description:</b> Provide independent, comprehensive systems engineering and integration efforts, via the SE&I contract. These efforts are focused on future system definition, baselines, range architectures, and integration planning for modernization and sustainment efforts. SE&I ensures modernization and sustainment efforts address operational requirements; launch enterprise transformation plans; reliability, maintainability, and availability factors; and necessary interfaces with IT systems.   |  |  |                |                |
| <b>FY 2012 Accomplishments:</b><br>Continued independent SE&I efforts to integrate modernization and sustainment efforts into the ranges for the future. Provided systems definition, baseline, architecture, integration planning and support for future systems. Included products of completed SLRSC instrumentation modernization and sustainment efforts in future plans, as well as sustainment products from follow-on LISC and modernization products from OPAF-funded network and command destruct contracts. |  |  |                |                |
| <b>FY 2013 Plans:</b><br>Continue independent SE&I efforts to integrate modernization and sustainment efforts into future ranges. Provide systems definition, baseline, architecture, integration planning and support for future systems. Refine plans to include LISC sustainment products and network and command destruct modernization products in future architecture.   |  |  |                |                |
| <b>FY 2014 Plans:</b><br>Expand independent SE&I efforts to integrate modernization and sustainment efforts into future ranges. Provide systems definition, baseline, architecture, integration planning and support for future systems. Add integration of LISC sustainment efforts, ER and WR network modernization, and command destruct modernization in range future architecture.  |  |  |                |                |
| <b>Title:</b> Program Management Administration  |  | 0.356  | 0.393          | 0.405          |

**UNCLASSIFIED**

|   |  |  |                |                |
|---|--|--|----------------|----------------|
| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2014 Air Force  |  | <b>DATE:</b> April 2013  |                |                |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i>  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0305182F: <i>Spacelift Range System (SPACE)</i> |                |                |
| <b>C. Accomplishments/Planned Programs (\$ in Millions)</b>   |  | <b>FY 2012</b>   | <b>FY 2013</b> | <b>FY 2014</b> |
| <b>Description:</b> Provide program management support, to include System Program Office operations, Systems Engineering and Technical Assistance (SETA), and Federally Funded Research and Development Centers (FFRDC).<br><br><b>FY 2012 Accomplishments:</b><br>Continued program management support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).<br><br><b>FY 2013 Plans:</b><br>Continue program management support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).<br><br><b>FY 2014 Plans:</b><br>Continue program management support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).   |  |  |                |                |
| <b>Title:</b> Standard Space Trainer<br><br><b>Description:</b> Develops the Standard Space Trainer (SST) application for the spacelift ranges. SST is the AFSPC/CC-directed training system for all Combat Mission Ready (CMR) space systems. It provides a common platform for all space operational training systems for both AFSPC and AETC. The Spacelift Range SST will be developed to support CMR training for the ranges' Aerospace Control Officer (ACO), Range Control Officer (RCO)/Range Operations Commander (ROC), Mission Flight Control Officer (MFCO) and Launch Weather Officer (LWO) positions.<br><br><b>FY 2012 Accomplishments:</b><br>N/A<br><br><b>FY 2013 Plans:</b><br>N/A<br><br><b>FY 2014 Plans:</b><br>Begins development of Standard Space Trainer application for ranges to provide more responsive, cost effective, and adaptive training capability than current training on operational system. |  | 0.000  | 0.000          | 4.474          |
| <b>Accomplishments/Planned Programs Subtotals</b>   |  | 9.245  | 8.760          | 13.345         |

# UNCLASSIFIED

|   |         |         |                 |  |                  |         |         |         |                  |                     |            |
|---|---------|---------|-----------------|--|------------------|---------|---------|---------|------------------|---------------------|------------|
| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force   |         |         |                 |  |                  |         |         |         | DATE: April 2013 |                     |            |
| APPROPRIATION/BUDGET ACTIVITY<br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development   |         |         |                 | R-1 ITEM NOMENCLATURE<br>PE 0305182F: Spacelift Range System (SPACE) |                  |         |         |         |                  |                     |            |
| D. Other Program Funding Summary (\$ in Millions)   |         |         |                 |  |                  |         |         |         |                  |                     |            |
| Line Item   | FY 2012 | FY 2013 | FY 2014<br>Base | FY 2014<br>OCO   | FY 2014<br>Total | FY 2015 | FY 2016 | FY 2017 | FY 2018          | Cost To<br>Complete | Total Cost |
| • OPAF: BA03: Line item # 836770:<br>Spacelift Range System Space   | 124.967 | 109.545 | 98.062          |  | 98.062           | 96.092  | 101.490 | 105.041 | 106.931          | Continuing          | Continuing |
| • OPAF: BA05: Line Item #<br>86190A: Spares and Repair Parts  | 2.976   | 3.076   | 3.120           |  | 3.120            | 3.172   | 0.000   | 0.000   | 0.000            | Continuing          | Continuing |
| Remarks   |         |         |                 |  |                  |         |         |         |                  |                     |            |
| E. Acquisition Strategy   |         |         |                 |  |                  |         |         |         |                  |                     |            |
| The AF will use competitively awarded, complementary contracts managed by the Space and Missile Systems Center (SMC) to modernize and sustain the ranges in FY14 on a minimal-interference basis as they continue to support operational launches and tests. These include the new Launch and Test Range System Integrated Support Contract (LISC) to be awarded in FY14, the Systems Engineering and Integration (SE&I) contract to be re-awarded in FY14, and the new Standard Space Trainer contract to be awarded in FY14. Additionally, SMC will obtain program management support via the Aerospace (FFRDC) contract. |         |         |                 |  |                  |         |         |         |                  |                     |            |
| 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.  |         |         |                 |  |                  |         |         |         |                  |                     |            |

**UNCLASSIFIED**

|  |                                   |   |                        |                |                   |   |                   |                     |                   |                    |                   |   |                         |                   |                                 |
|--|-----------------------------------|---|------------------------|----------------|-------------------|---|-------------------|---------------------|-------------------|--------------------|-------------------|---|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2014 Air Force</b>   |                                   |   |                        |                |                   |   |                   |                     |                   |                    |                   | <b>DATE:</b> April 2013   |                         |                   |                                 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development |                                   |   |                        |                |                   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0305182F: Spacelift Range System (SPACE) |                   |                     |                   |                    |                   | <b>PROJECT</b><br>674137: Launch and Test Range System (LTRS) Modernization |                         |                   |                                 |
| <b>Product Development (\$ in Millions)</b>  |                                   |   |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>  |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>  |                         |                   |                                 |
| <b>Cost Category Item</b>  | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>   | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| Spacelift Range System Contract (SLRSC)  | C/CPAF                            | ITT Exelis:Cape Canaveral, FL             | -                      | 6.172          | Nov 2011          | 6.210   | Nov 2012          | 0.000               |                   | -                  |                   | 0.000   | Continuing              | Continuing        | TBD                             |
| LTRS Integrated Support Contract (LISC)  | C/FPIF                            | TBD:TBD,                                  | -                      | 0.000          |                   | 0.000   |                   | 1.900               | Jan 2014          | -                  |                   | 1.900   | Continuing              | Continuing        | TBD                             |
| Standard Space Trainer   | SS/CPFF                           | Sonalysts, Inc:Waterford, CT              | -                      | 0.000          |                   | 0.000   |                   | 4.474               | Dec 2013          | -                  |                   | 4.474   | Continuing              | Continuing        | 9.129                           |
| Systems Engineering and Integration Contract   | C/CPIF                            | Booz Allen and Hamilton:McLean, VA        | -                      | 2.717          | Dec 2011          | 2.157   | Dec 2012          | 6.566               | Dec 2013          | -                  |                   | 6.566   | Continuing              | Continuing        | TBD                             |
| <b>Subtotal</b>  |                                   |   | 0.000                  | 8.889          |                   | 8.367   |                   | 12.940              |                   | 0.000              |                   | 12.940  |                         |                   |                                 |
| <b>Support (\$ in Millions)</b>  |                                   |   |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>  |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>  |                         |                   |                                 |
| <b>Cost Category Item</b>  | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>   | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Subtotal</b>  |                                   |   | 0.000                  | 0.000          |                   | 0.000   |                   | 0.000               |                   | 0.000              |                   | 0.000   | 0.000                   | 0.000             | 0.000                           |
| <b>Test and Evaluation (\$ in Millions)</b>  |                                   |   |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>  |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>  |                         |                   |                                 |
| <b>Cost Category Item</b>  | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>   | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Subtotal</b>  |                                   |   | 0.000                  | 0.000          |                   | 0.000   |                   | 0.000               |                   | 0.000              |                   | 0.000   | 0.000                   | 0.000             | 0.000                           |
| <b>Management Services (\$ in Millions)</b>  |                                   |   |                        | <b>FY 2012</b> |                   | <b>FY 2013</b>  |                   | <b>FY 2014 Base</b> |                   | <b>FY 2014 OCO</b> |                   | <b>FY 2014 Total</b>  |                         |                   |                                 |
| <b>Cost Category Item</b>  | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>All Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>   | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| Program Support (FFRDC)  | RO                                | Aerospace:El Segundo, CA                  | -                      | 0.356          | Nov 2011          | 0.393   | Jan 2013          | 0.405               | Jan 2014          | -                  |                   | 0.405   | Continuing              | Continuing        | TBD                             |
| <b>Subtotal</b>  |                                   |   | 0.000                  | 0.356          |                   | 0.393   |                   | 0.405               |                   | 0.000              |                   | 0.405   |                         |                   |                                 |

**UNCLASSIFIED**

|   |                 |         |  |         |  |              |  |             |  |                  |                  |            |                          |
|---|-----------------|---------|--|---------|--|--------------|--|-------------|--|------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force   |                 |         |  |         |  |              |  |             |  | DATE: April 2013 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development |                 |         |  |         | R-1 ITEM NOMENCLATURE<br>PE 0305182F: Spacelift Range System (SPACE) |              |  |             | PROJECT<br>674137: Launch and Test Range System (LTRS) Modernization |                  |                  |            |                          |
|   | All Prior Years | FY 2012 |  | FY 2013 |  | FY 2014 Base |  | FY 2014 OCO |  | FY 2014 Total    | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals   | 0.000           | 9.245   |  | 8.760   |  | 13.345       |  | 0.000       |  | 13.345           |                  |            |                          |

Remarks

# UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

## APPROPRIATION/BUDGET ACTIVITY

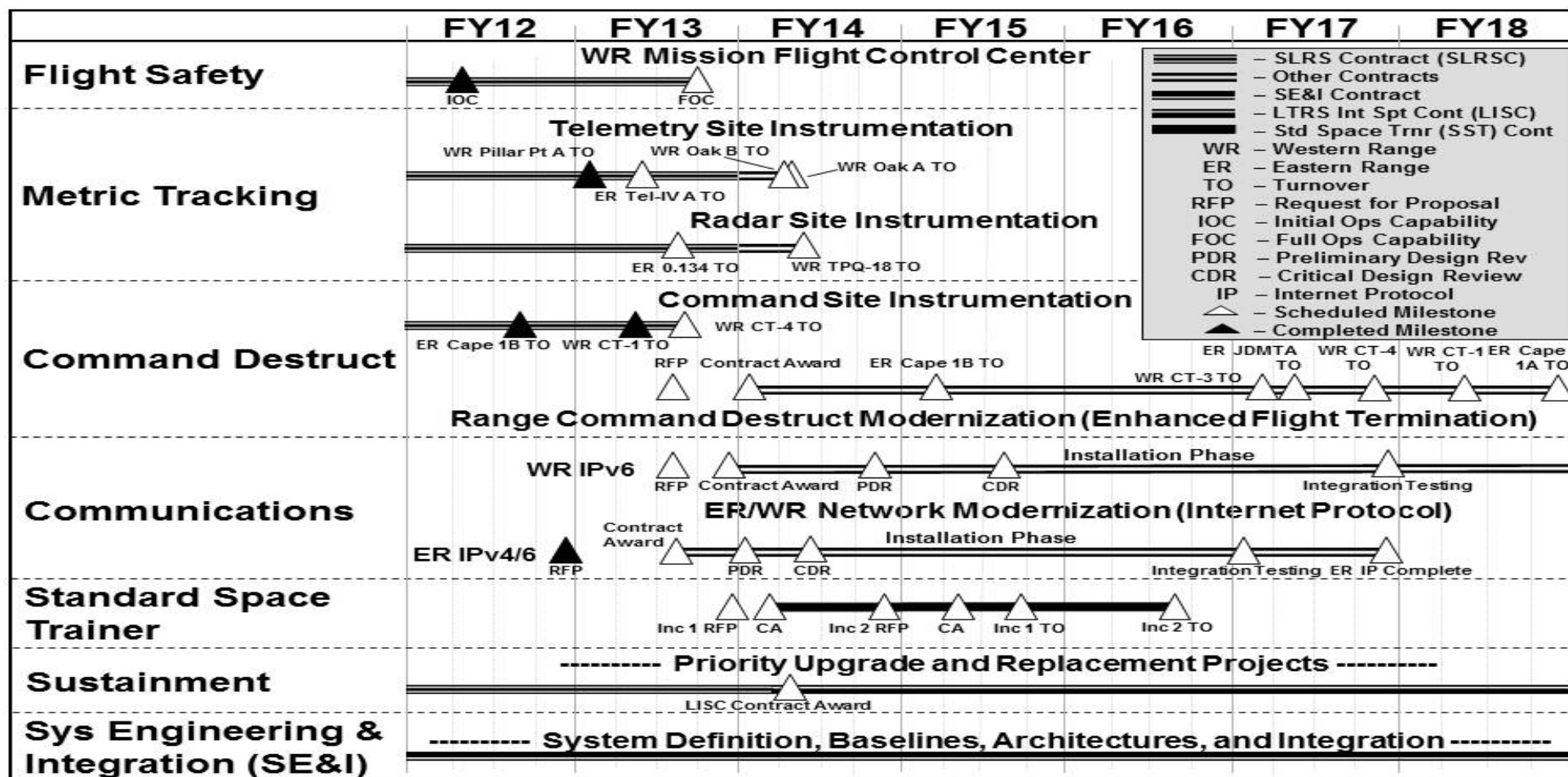
3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

## R-1 ITEM NOMENCLATURE

PE 0305182F: Spacelift Range System  
(SPACE)

## PROJECT

674137: Launch and Test Range System  
(LTRS) Modernization



Note: Schedule represents integrated view of RDT&E and OPAF funded modernization/sustainment efforts



# UNCLASSIFIED

|  |  |  |                         |
|--|--|--|-------------------------|
| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2014 Air Force   |  |  | <b>DATE:</b> April 2013 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i><br>BA 7: <i>Operational Systems Development</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0305182F: <i>Spacelift Range System (SPACE)</i> | <b>PROJECT</b><br>674137: <i>Launch and Test Range System (LTRS) Modernization</i> |                         |

## Schedule Details

| Events  | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| - WR Mission Flight Control Center Ops Acceptance                           | 1       | 2012 | 2       | 2012 |
| - WR Mission Flight Control Center IOC                                      | 2       | 2012 | 2       | 2012 |
| - WR Mission Flight Control Center FOC                                      | 4       | 2013 | 4       | 2013 |
| - Metric Tracking (Telemetry) WR Pillar Point Info Assurance Fixes Complete | 1       | 2012 | 2       | 2012 |
| - Metric Tracking (Telemetry) WR Pillar Point Ops Turnover                  | 2       | 2012 | 1       | 2013 |
| - Metric Tracking (Telemetry) ER Tel-IV Authority to Operate                | 1       | 2012 | 3       | 2012 |
| - Metric Tracking (Telemetry) ER Tel-IV Ops Turnover                        | 4       | 2012 | 2       | 2013 |
| - Metric Tracking (Telemetry) WR Oak Mtn B T&E                              | 4       | 2012 | 1       | 2013 |
| - Metric Tracking (Telemetry) WR Oak Mtn B Ops Turnover                     | 2       | 2013 | 2       | 2014 |
| - Metric Tracking (Telemetry) WR Oak Mtn A Antenna Turnover                 | 2       | 2012 | 4       | 2012 |
| - Metric Tracking (Telemetry) WR Oak Mtn A Site Ops Turnover                | 1       | 2013 | 2       | 2014 |
| - Metric Tracking (Radar) ER Patrick Site Ops Turnover                      | 1       | 2012 | 3       | 2013 |
| - Metric Tracking (Radar) WR VAFB Site T&E                                  | 1       | 2013 | 2       | 2013 |
| - Metric Tracking (Radar) WR VAFB Site Ops Turnover                         | 3       | 2013 | 2       | 2014 |
| - Command Instrumentation Site WR CT-1 Ops Testing                          | 1       | 2012 | 2       | 2012 |
| - Command Instrumentation Site WR CT-1 Ops Turnover                         | 2       | 2012 | 2       | 2013 |
| - Command Instrumentation Site ER Cape 1B Ops Testing                       | 1       | 2012 | 2       | 2012 |
| - Command Instrumentation Site ER Cape 1B Ops Turnover                      | 2       | 2012 | 3       | 2012 |
| - Command Instrumentation Site WR CT-4 Ops Testing                          | 3       | 2012 | 2       | 2013 |
| - Command Instrumentation Site WR CT-4 Ops Turnover                         | 3       | 2013 | 3       | 2013 |
| - Standard Space Trainer Increment 1 Contract Award                         | 1       | 2014 | 1       | 2014 |
| - Standard Space Trainer Increment 1 Turnover                               | 3       | 2015 | 3       | 2015 |

UNCLASSIFIED

|   |  |  |                  |  |
|---|--|--|------------------|--|
| Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force   |  |  | DATE: April 2013 |  |
| APPROPRIATION/BUDGET ACTIVITY<br>3600: Research, Development, Test & Evaluation, Air Force<br>BA 7: Operational Systems Development |  | R-1 ITEM NOMENCLATURE<br>PE 0305182F: Spacelift Range System (SPACE) |                  | PROJECT<br>674137: Launch and Test Range System (LTRS) Modernization |
|   |  | Start  |                  | End  |
| Events  |  | Quarter  | Year             | Quarter Year   |
| - Standard Space Trainer Increment 2 Contract Award   |  | 2  | 2015             | 2 2015   |
| - Standard Space Trainer Increment 2 Turnover   |  | 3  | 2016             | 3 2016   |