

# DEPARTMENT OF THE ARMY

## Procurement Programs



Committee Staff Procurement Backup Book  
Fiscal Year (FY) 2006 / 2007 President's Budget

### MISSILE PROCUREMENT, ARMY

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APPROPRIATION

February 2005



# MISSILE PROCUREMENT, ARMY

## Appropriation Language

For construction, procurement, production, modification, and modernization of missile equipment, including ordnance, ground handling equipment, spare parts, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefore, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes, \$1, 270, 850,000 to remain available for obligation until September 30, 2008.

## Performance Metrics

Performance metrics used in the preparation of this book may be found in the FY 2006 Army Performance Budget Justification Book, dated 18 February 2005.



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APPROPRIATION SUMMARY  
APPROPRIATION

|                                  | DOLLARS IN THOUSANDS |                  |                  |
|----------------------------------|----------------------|------------------|------------------|
|                                  | <u>FY 2004</u>       | <u>FY 2005</u>   | <u>FY 2006</u>   |
| Missile Procurement, Army        | 1,516,740            | 1,301,952        | 1,270,850        |
| <b>TOTAL PROCUREMENT PROGRAM</b> | <b>1,516,740</b>     | <b>1,301,952</b> | <b>1,270,850</b> |

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APPROPRIATION Missile Procurement, Army  
ACTIVITY

DOLLARS IN THOUSANDS

|                                     | <u>FY 2004</u>   | <u>FY 2005</u>   | <u>FY 2006</u>   |
|-------------------------------------|------------------|------------------|------------------|
| 02 Other missiles                   | 1,186,004        | 1,132,572        | 1,107,476        |
| 03 Modification of missiles         | 274,378          | 126,455          | 123,585          |
| 04 Spares and repair parts          | 49,284           | 33,649           | 30,142           |
| 05 Support equipment and facilities | 7,074            | 9,276            | 9,647            |
| <b>APPROPRIATION TOTALS</b>         | <b>1,516,740</b> | <b>1,301,952</b> | <b>1,270,850</b> |

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| APPROPRIATION                           | Missile Procurement, Army  | ACTIVITY | 02  | Other missiles | DOLLARS IN THOUSANDS |                  |         |                  |
|---|--|----------|-----|----------------|----------------------|------------------|---------|------------------|
|   |  |          |     |                | FY 2004              | FY 2005          | FY 2006 |                  |
| LINE NO                                 | ITEM NOMENCLATURE  | ID       | QTY | COST           | QTY                  | COST             | QTY     | COST             |
| <i>SURFACE-TO-AIR MISSILE SYSTEM</i>    |  |          |     |                |                      |                  |         |                  |
| 1                                       | PATRIOT SYSTEM SUMMARY (C49100)  | A        | 135 | 616,942        | 108                  | 487,364          | 108     | 489,700          |
| 2                                       | STINGER SYSTEM SUMMARY (C18500)  | A        |     | 2,920          |                      |                  |         |                  |
| 3                                       | Surface-Launched AMRAAM System Summary: (C81001)   | A        |     | 7,397          |                      | 2,440            |         | 19,315           |
| 4                                       | Surface-Launched AMRAAM System Summary: (C81001)<br>Advance Procurement (CY)             |          |     |                |                      |                  |         |                  |
|   | <i>SUB-ACTIVITY TOTAL</i>  |          |     | <u>627,259</u> |                      | <u>489,804</u>   |         | <u>509,015</u>   |
| <i>AIR-TO-SURFACE MISSILE SYSTEM</i>    |  |          |     |                |                      |                  |         |                  |
| 5                                       | HELLFIRE SYS SUMMARY (C70000)  | A        |     | 24,875         |                      | 108,056          |         | 80,073           |
| 6                                       | APKWS (Advanced Precision Kill Weapon System) (C70301)<br>Less: Advance Procurement (PY) |          |     |                |                      | (728)            | 600     | (34,055)         |
|   |  |          |     |                |                      | <u>728</u>       |         | <u>(-6,124)</u>  |
|   |  |          |     |                |                      |                  |         | 27,931           |
| 7                                       | APKWS (Advanced Precision Kill Weapon System) (C70301)<br>Advance Procurement (CY)       |          |     |                |                      | 6,124            |         |                  |
|   | <i>SUB-ACTIVITY TOTAL</i>  |          |     | <u>24,875</u>  |                      | <u>114,908</u>   |         | <u>108,004</u>   |
| <i>ANTI-TANK/ASSAULT MISSILE SYSTEM</i> |  |          |     |                |                      |                  |         |                  |
| 8                                       | JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)<br>Less: Advance Procurement (PY)               |          | 991 | (132,954)      | 1,038                | (124,948)        | 300     | (57,636)         |
|   |  |          |     | <u>132,954</u> |                      | <u>(-7,600)</u>  |         | <u>57,636</u>    |
| 9                                       | JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)<br>Advance Procurement (CY)                     |          |     | 7,600          |                      | 117,348          |         |                  |
| 10                                      | LINE OF SIGHT ANTI-TANK (LOSAT) SYSTEM SUM (H09000)                                      |          | 34  | 34,341         | 12                   | 14,942           |         |                  |
| 11                                      | TOW 2 SYSTEM SUMMARY (C59300)<br>Less: Advance Procurement (PY)                          | A        | 200 | (10,815)       | 500                  | (25,711)         | 800     | (44,002)         |
|   |  |          |     | <u>10,815</u>  |                      | <u>(-12,946)</u> |         | <u>(-16,795)</u> |
|   |  |          |     |                |                      | 12,765           |         | 27,207           |

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| LINE NO | ITEM NOMENCLATURE   | ID | DOLLARS IN THOUSANDS |                  |         |                  |         |                  |
|---------|---|----|----------------------|------------------|---------|------------------|---------|------------------|
|         |   |    | FY 2004              |                  | FY 2005 |                  | FY 2006 |                  |
|         |   |    | QTY                  | COST             | QTY     | COST             | QTY     | COST             |
| 12      | TOW 2 SYSTEM SUMMARY (C59300)<br>Advance Procurement (CY) |    |                      | 16,366           |         | 13,375           |         | 18,900           |
| 13      | Guided MLRS Rocket (GMLRS) (C64400)                       |    | 786                  | 106,767          | 954     | 111,868          | 1,026   | 124,814          |
| 14      | MLRS REDUCED RANGE PRACTICE ROCKETS (RRPR) (C65405)       |    | 1,176                | 8,089            | 822     | 6,601            | 900     | 7,726            |
| 15      | MLRS LAUNCHER SYSTEMS (C66400)                            |    |                      | 37,619           |         | 21,118           |         | 20,787           |
| 16      | High Mobility Artillery Rocket System (HIMARS) (C02901)   |    | 24                   | 121,747          | 37      | 168,596          | 35      | 174,929          |
| 17      | ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)         | B  | 60                   | 57,572           | 50      | 61,247           | 45      | 58,458           |
|         | <i>SUB-ACTIVITY TOTAL</i>                                 |    |                      | <u>533,870</u>   |         | <u>527,860</u>   |         | <u>490,457</u>   |
|         | <b>ACTIVITY TOTAL</b>                                     |    |                      | <u>1,186,004</u> |         | <u>1,132,572</u> |         | <u>1,107,476</u> |

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| APPROPRIATION Missile Procurement, Army |  | ACTIVITY 03 Modification of missiles |         | DOLLARS IN THOUSANDS |         |                |         |                |
|---|--|--------------------------------------|---------|----------------------|---------|----------------|---------|----------------|
| LINE NO                                 | ITEM NOMENCLATURE                        | ID                                   | FY 2004 |                      | FY 2005 |                | FY 2006 |                |
|   |  |                                      | QTY     | COST                 | QTY     | COST           | QTY     | COST           |
| <i>MODIFICATIONS</i>                    |  |                                      |         |                      |         |                |         |                |
| 18                                      | PATRIOT MODS (C50700)                    |                                      |         | 225,022              |         | 87,608         |         | 77,411         |
| 19                                      | STINGER MODS (C20000)                    |                                      |         | 966                  |         |                |         |                |
| 20                                      | JAVELIN Missile MODS (CC1000)            | A                                    |         |                      |         |                |         | 14,007         |
| 21                                      | ITAS/TOW MODS (C61700)                   |                                      |         | 26,634               |         | 9,746          |         | 9,587          |
| 22                                      | MLRS MODS (C67500)                       |                                      |         | 19,770               |         | 18,897         |         | 14,579         |
| 23                                      | HIMARS MODIFICATIONS: (NON AAO) (C67501) |                                      |         | 1,986                |         | 472            |         | 8,001          |
| 24                                      | HELLFIRE Modifications (C71500)          |                                      |         |                      |         | 9,732          |         |                |
|   | <i>SUB-ACTIVITY TOTAL</i>                |                                      |         | <u>274,378</u>       |         | <u>126,455</u> |         | <u>123,585</u> |
|   | <b>ACTIVITY TOTAL</b>                    |                                      |         | <b>274,378</b>       |         | <b>126,455</b> |         | <b>123,585</b> |

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| APPROPRIATION Missile Procurement, Army |                                  | ACTIVITY 04 Spares and repair parts |                     | DOLLARS IN THOUSANDS |                     |               |  |
|---|----------------------------------|-------------------------------------|---------------------|----------------------|---------------------|---------------|--|
| LINE NO                                 | ITEM NOMENCLATURE                | ID                                  | FY 2004<br>QTY COST | FY 2005<br>QTY COST  | FY 2006<br>QTY COST |               |  |
|   | <i>SPARES AND REPAIR PARTS</i>   |                                     |                     |                      |                     |               |  |
| 25                                      | SPARES AND REPAIR PARTS (CA0250) |                                     | 49,284              | 33,649               |                     | 30,142        |  |
|   | <i>SUB-ACTIVITY TOTAL</i>        |                                     | <u>49,284</u>       | <u>33,649</u>        |                     | <u>30,142</u> |  |
|   | <b>ACTIVITY TOTAL</b>            |                                     | <b>49,284</b>       | <b>33,649</b>        |                     | <b>30,142</b> |  |

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| APPROPRIATION                           | Missile Procurement, Army                  | ACTIVITY | 05 Support equipment and facilities | DOLLARS IN THOUSANDS |     |           |     |           |
|---|--|----------|-------------------------------------|----------------------|-----|-----------|-----|-----------|
|   |  |          |                                     | FY 2004              |     | FY 2005   |     | FY 2006   |
| LINE NO                                 | ITEM NOMENCLATURE                          | ID       | QTY                                 | COST                 | QTY | COST      | QTY | COST      |
| <i>SUPPORT EQUIPMENT AND FACILITIES</i> |  |          |                                     |                      |     |           |     |           |
| 26                                      | AIR DEFENSE TARGETS (C93000)               |          |                                     | 3,438                |     | 5,820     |     | 6,156     |
| 27                                      | ITEMS LESS THAN \$5.0M (MISSILES) (CL2000) |          |                                     | 10                   |     | 10        |     | 10        |
| 28                                      | PRODUCTION BASE SUPPORT (CA0100)           |          |                                     | 3,396                |     | 3,446     |     | 3,481     |
| 29                                      | CLOSED ACCOUNT ADJUSTMENTS (CX9999)        |          |                                     | 230                  |     |           |     |           |
|   | <i>SUB-ACTIVITY TOTAL</i>                  |          |                                     | 7,074                |     | 9,276     |     | 9,647     |
|   | <b>ACTIVITY TOTAL</b>                      |          |                                     | 7,074                |     | 9,276     |     | 9,647     |
|   | <b>APPROPRIATION TOTAL</b>                 |          |                                     | 1,516,740            |     | 1,301,952 |     | 1,270,850 |

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| 2           | C18500     | STINGER SYSTEM SUMMARY                                   | 9           |
| 3           | C81001     | Surface-Launched AMRAAM System Summary:                  | 11          |
| 4           | C81001     | Surface-Launched AMRAAM System Summary: (Adv Proc)       | 20          |
| 5           | C70000     | HELLFIRE SYS SUMMARY                                     | 23          |
| 6           | C70301     | APKWS (Advanced Precision Kill Weapon System)            | 33          |
| 7           | C70301     | APKWS (Advanced Precision Kill Weapon System) (Adv Proc) | 40          |
| 8           | CC0007     | JAVELIN (AAWS-M) SYSTEM SUMMARY                          | 43          |
| 9           | CC0007     | JAVELIN (AAWS-M) SYSTEM SUMMARY (Adv Proc)               | 54          |
| 10          | H09000     | LINE OF SIGHT ANTI-TANK (LOSAT) SYSTEM SUM               | 56          |
| 11          | C59300     | TOW 2 SYSTEM SUMMARY                                     | 62          |
| 12          | C59300     | TOW 2 SYSTEM SUMMARY (Adv Proc)                          | 69          |
| 13          | C64400     | Guided MLRS Rocket (GMLRS)                               | 72          |
| 14          | C65405     | MLRS REDUCED RANGE PRACTICE ROCKETS (RRPR)               | 85          |
| 15          | C66400     | MLRS LAUNCHER SYSTEMS                                    | 91          |
| 16          | C02901     | High Mobility Artillery Rocket System (HIMARS)           | 96          |
| 17          | C98510     | ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM                 | 104         |
| 18          | C50700     | PATRIOT MODS   | 110         |
| 19          | C20000     | STINGER MODS   | 118         |
| 20          | CC1000     | JAVELIN Missile MODS                                     | 120         |
| 21          | C61700     | ITAS/TOW MODS  | 124         |

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| 22          | C67500     | MLRS MODS                         | 128         |
| 23          | C67501     | HIMARS MODIFICATIONS: (NON AAO)   | 145         |
| 24          | C71500     | HELLFIRE Modifications            | 153         |
| 25          | CA0250     | SPARES AND REPAIR PARTS           | 159         |
| 26          | C93000     | AIR DEFENSE TARGETS               | 160         |
| 27          | CL2000     | ITEMS LESS THAN \$5.0M (MISSILES) | 166         |
| 28          | CA0100     | PRODUCTION BASE SUPPORT           | 168         |

## Exhibit P-1M, Procurement Programs - Modification Summary

| <u>System/Modification</u>                        | <u>2004 &amp; Prior</u> | <u>2005</u> | <u>2006</u> | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>2011</u> | <u>To Complete</u> | <u>Total Program</u> |
|---|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|----------------------|
| <b>PATRIOT MODS (C50700)</b>                      |                         |             |             |             |             |             |             |             |                    |                      |
| RLCEU   | 109.1                   |             |             |             |             |             |             |             |                    | 109.1                |
| BCP   | 48.1                    | 7.3         |             |             |             |             |             |             |                    | 55.4                 |
| RAM MODS  | 67.6                    | 35.8        | 23.0        | 20.9        | 48.0        | 47.3        | 47.1        | 49.4        | 273.4              | 612.6                |
| Radar Phase III                                   | 109.3                   |             |             |             |             |             |             |             |                    | 109.3                |
| CDI Phase III                                     | 42.5                    |             |             |             |             |             |             |             |                    | 42.5                 |
| TCS   | 25.7                    | 11.3        | 9.1         | 1.7         | 5.4         | 5.4         | 5.3         | 5.3         |                    | 69.1                 |
| Recapitalization                                  | 62.9                    | 33.5        | 45.3        | 46.2        | 34.8        | 9.1         | 13.6        | 13.6        | 113.9              | 372.8                |
| <b>Total</b>                                      | <b>465.2</b>            | <b>87.9</b> | <b>77.4</b> | <b>68.8</b> | <b>88.1</b> | <b>61.8</b> | <b>65.9</b> | <b>68.2</b> | <b>387.3</b>       | <b>1370.8</b>        |
| <b>STINGER BLK I UPGRADES (C21300)</b>            |                         |             |             |             |             |             |             |             |                    |                      |
| Stinger Block I Platform Upgrades (C21300)        | 16.6                    |             |             |             |             |             |             |             |                    | 16.6                 |
| Stinger Block I Missile Upgrades (C21300)         | 138.9                   |             |             |             |             |             |             |             |                    | 138.9                |
| Stinger Troop Proficiency Trainer                 | 3.1                     |             |             |             |             |             |             |             |                    | 3.1                  |
| Linebacker Training Devices                       | 5.8                     |             |             |             |             |             |             |             |                    | 5.8                  |
| <b>Total</b>                                      | <b>164.4</b>            |             |             |             |             |             |             |             |                    | <b>164.4</b>         |
| <b>JAVELIN Missile MODS (CC1000)</b>              |                         |             |             |             |             |             |             |             |                    |                      |
| Javelin Missile MODS (CC1000)                     |                         |             | 14.0        | 12.5        | 13.3        | 15.7        |             |             |                    | 55.5                 |
| <b>Total</b>                                      |                         |             | <b>14.0</b> | <b>12.5</b> | <b>13.3</b> | <b>15.7</b> |             |             |                    | <b>55.5</b>          |
| <b>ITAS/TOW MODS (C61700)</b>                     |                         |             |             |             |             |             |             |             |                    |                      |
| ITAS (IMPROVED TARGET ACQUISITION SYSTEM)         | 424.0                   | 9.7         | 9.6         |             | 22.4        | 45.6        | 44.9        | 66.5        |                    | 622.7                |
| <b>Total</b>                                      | <b>424.0</b>            | <b>9.7</b>  | <b>9.6</b>  |             | <b>22.4</b> | <b>45.6</b> | <b>44.9</b> | <b>66.5</b> |                    | <b>622.7</b>         |
| <b>MLRS MODS (C67500)</b>                         |                         |             |             |             |             |             |             |             |                    |                      |
| Inactive Mods                                     | 220.3                   |             |             |             |             |             |             |             |                    | 220.3                |
| Interim Improved Position Determining System Lchr | 25.0                    | 0.3         |             |             |             |             |             |             |                    | 25.4                 |

## Exhibit P-1M, Procurement Programs - Modification Summary

| <u>System/Modification</u>                         | <u>2004 &amp; Prior</u> | <u>2005</u> | <u>2006</u> | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> | <u>2011</u> | <u>To Complete</u> | <u>Total Program</u> |
|--|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------------|----------------------|
| Selective Availability Anti-Spoofing Module        |                         | 7.5         |             |             |             |             |             |             |                    | 7.6                  |
| Joint Technical Architecture-Army (JTA-A)          | 11.3                    | 0.6         | 0.3         |             |             |             |             |             |                    | 12.2                 |
| Improved Weapons Interface Unit Modification MOD   | 11.5                    | 0.6         | 0.1         | 0.1         | 0.1         |             |             |             |                    | 12.4                 |
| M270A1 Generator Improvements                      | 0.8                     | 0.1         | 0.2         |             |             |             |             |             |                    | 1.2                  |
| Obsolescence Mitigation/ECP Reliability Intg       | 26.2                    | 2.1         | 4.5         | 0.9         | 0.8         | 0.4         | 0.4         | 0.3         | 23.3               | 58.9                 |
| 600 Horsepower (hp) Engine Conversion              | 12.6                    | 0.2         |             |             |             |             |             |             |                    | 12.8                 |
| LLM Disable Switch                                 | 0.6                     | 0.1         | 0.1         | 0.1         |             |             |             |             |                    | 1.0                  |
| Cordless Vehicular Intercommunication (VIS)        |                         |             |             | 3.0         | 0.1         | 0.1         | 0.1         |             |                    | 3.2                  |
| Machine Gun Mount                                  |                         |             | 0.4         | 0.1         |             |             |             |             |                    | 0.5                  |
| Global Positioning System (GPS) Upgrades           |                         |             |             | 0.2         | 3.9         | 1.3         | 2.7         | 2.8         | 3.7                | 14.6                 |
| M993A1 Carrier Block I Upgrades                    |                         |             | 3.5         | 1.7         |             |             |             |             |                    | 5.2                  |
| Auxiliary Power Unit/Environmental Control Unit    |                         | 7.4         | 4.8         | 0.7         | 0.6         |             |             |             |                    | 13.5                 |
| Elevation Resolver                                 |                         |             | 0.5         |             |             |             |             |             |                    | 0.5                  |
| S-250 Shelter                                      |                         |             | 0.1         |             |             |             |             |             |                    | 0.1                  |
| <b>Total</b>                                       | <b>308.4</b>            | <b>18.9</b> | <b>14.6</b> | <b>6.8</b>  | <b>5.5</b>  | <b>1.9</b>  | <b>3.1</b>  | <b>3.1</b>  | <b>27.0</b>        | <b>389.3</b>         |
| <b>HIMARS MODIFICATIONS: (NON AAO) (C67501)</b>    |                         |             |             |             |             |             |             |             |                    |                      |
| Machine Gun Mount                                  |                         |             | 0.4         | 0.1         |             |             |             |             |                    | 0.5                  |
| Carrier Upgrades                                   |                         |             | 0.1         | 0.2         |             |             |             |             |                    | 0.3                  |
| Manifold   | 1.4                     |             |             |             |             |             |             |             |                    | 1.4                  |
| Reliability/Obsolescence Mitigation                | 0.6                     | 0.4         | 0.9         | 1.4         | 1.9         | 2.0         | 2.0         | 1.9         | 10.9               | 21.9                 |
| PNU/GPS Upgrades                                   |                         |             |             | 0.1         | 0.1         | 0.1         |             |             |                    | 0.3                  |
| Cordless Vehicular Intercommunication System (VIS) |                         |             | 1.1         |             |             |             |             |             |                    | 1.1                  |
| Add on Armor (AoA)                                 |                         | 0.1         | 2.8         | 0.4         |             |             |             |             |                    | 3.2                  |
| Universal Fire Control System (UFCS)               |                         |             | 2.7         | 7.2         | 0.9         |             |             |             | 48.2               | 59.0                 |
| Increased Crew Protection                          |                         |             |             |             | 7.4         | 9.6         | 9.8         | 7.4         | 3.0                | 37.2                 |
| <b>Total</b>                                       | <b>2.0</b>              | <b>0.5</b>  | <b>8.0</b>  | <b>9.3</b>  | <b>10.4</b> | <b>11.7</b> | <b>11.9</b> | <b>9.2</b>  | <b>62.1</b>        | <b>125.0</b>         |
| <b>HELLFIRE Modifications (C71500)</b>             |                         |             |             |             |             |             |             |             |                    |                      |
| Home-on-Jam/Anti-Jam                               |                         | 3.6         |             |             |             |             |             |             |                    | 3.6                  |

## Exhibit P-1M, Procurement Programs - Modification Summary

| <u>System/Modification</u> | <u>2004 &amp; Prior</u> | <u>2005</u>  | <u>2006</u>  | <u>2007</u> | <u>2008</u>  | <u>2009</u>  | <u>2010</u>  | <u>2011</u>  | <u>To Complete</u> | <u>Total Program</u> |
|----------------------------|-------------------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------------|----------------------|
| Rocket Motor Refit         |                         | 6.1          |              |             |              |              |              |              |                    | 6.1                  |
| <b>Total</b>               |                         | <b>9.7</b>   |              |             |              |              |              |              |                    | <b>9.7</b>           |
| <b>Grand Total</b>         | <b>1364.0</b>           | <b>126.7</b> | <b>123.6</b> | <b>97.4</b> | <b>139.7</b> | <b>136.6</b> | <b>125.8</b> | <b>147.1</b> | <b>476.4</b>       | <b>2737.3</b>        |



# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
Patriot System Summary (C49100)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

PE 0604865A, 0603869A, 0604869A, SSN C49200, C53000

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 6475        |         | 135     | 108     | 108     | 108     | 108     | 108     |         |         |             | 7150       |
| Gross Cost       | 5064.5      |         | 616.9   | 487.4   | 489.7   | 494.8   | 466.0   | 471.8   |         |         |             | 8091.0     |
| Less PY Adv Proc | 123.3       |         |         |         |         |         |         |         |         |         |             | 123.3      |
| Plus CY Adv Proc | 123.3       |         |         |         |         |         |         |         |         |         |             | 123.3      |
| Net Proc (P-1)   | 5064.5      |         | 616.9   | 487.4   | 489.7   | 494.8   | 466.0   | 471.8   |         |         |             | 8091.0     |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 5064.5      |         | 616.9   | 487.4   | 489.7   | 494.8   | 466.0   | 471.8   |         |         |             | 8091.0     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         | 4.6     | 4.5     | 4.5     | 4.6     | 4.3     | 4.4     |         |         |             |            |

**Description:**

Patriot is an advanced Surface-to-Air guided missile system with a high single shot kill probability capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missiles likely to be encountered by U.S. Forces. The system utilizes a multifunction Phased Array Radar, a digital computer controlling system function, a guidance system combining command and homing (track-via-missile) features, and provides the operator the ability to control operations. The system is integrated with the U.S. Air Force and U.S. Navy in the overall air defense of theater operations. The Patriot Advanced Capability 3 (PAC-3) program is a result of a series of integrated, phased system improvements in combination with the PAC-3 missile, which uses hit-to-kill technology. Modification to the system, which includes radar enhancements, communications upgrades, and increased command, control, and computer capability, will increase Patriot's effectiveness, survivability, flexibility of defense design, footprint, and detection of smaller low radar cross section targets.

The FY06/07 budget combines the PAC-3/MEADS program based on a Milestone B decision, 1 July 2004. The Army revised the MEADS acquisition strategy to combine management, development, and fielding of both the MEADS and Patriot systems. The Patriot/MEADS Combined Aggregate Program (CAP) will provide for the evolution of the Patriot/PAC-3 system to the MEADS objective system through the early introduction of the MEADS Major End Items. This approach provides for earlier fielding of enhanced air and missile defense capabilities across the currently fielded force to counter the evolving threat and allow for the knowledge that was gained in the development and fielding of the Patriot System to be fused into the MEADS program. The PAC-3 missile is the baseline missile for the MEADS system. The Missile Segment Enhancement (MSE) missile, which provides for greater ranges, will be the objective missile for the system. The first year of procurement for the MSE missile, SSN C53101, (initial production facilitization) and the MEADS Ground Support Equipment, SSN C53201, (initial BMC4I) will begin in FY08.

**Justification:**

FY06/FY07 funding supports procurement of 108 PAC-3 missiles each year.

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
Patriot PAC-3 (C49200)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

PE 0604865A, PE 0604869A, SSN C49100

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 6475        |         | 135     | 108     | 108     | 108     | 108     | 108     |         |         |             | 7150       |
| Gross Cost       | 5064.5      |         | 616.9   | 487.4   | 489.7   | 494.8   | 466.0   | 471.8   |         |         |             | 8091.0     |
| Less PY Adv Proc | 123.3       |         |         |         |         |         |         |         |         |         |             | 123.3      |
| Plus CY Adv Proc | 123.3       |         |         |         |         |         |         |         |         |         |             | 123.3      |
| Net Proc (P-1)   | 5064.5      |         | 616.9   | 487.4   | 489.7   | 494.8   | 466.0   | 471.8   |         |         |             | 8091.0     |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 5064.5      |         | 616.9   | 487.4   | 489.7   | 494.8   | 466.0   | 471.8   |         |         |             | 8091.0     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         | 4.6     | 4.5     | 4.5     | 4.6     | 4.3     | 4.4     |         |         |             |            |

**Description:**

Patriot is an advanced Surface-to-Air guided missile system with a high single shot kill probability capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missiles likely to be encountered by U.S. Forces. The system utilizes a multifunction Phased Array Radar, a digital computer controlling system function, a guidance system combining command and homing (track-via-missile) features, and provides the operator the ability to control operations. The system is integrated with the U.S. Air Force and U.S. Navy in the overall air defense of theater operations. The Patriot Advanced Capability 3 (PAC-3) program is a result of a series of integrated, phased system improvements in combination with the PAC-3 missile which, uses hit-to-kill technology. Modification to the system, which includes radar enhancements, communications upgrades, and increased command, control, and computer capability, will increase Patriot's effectiveness, survivability, flexibility of defense design, footprint, and detection of smaller low radar cross section targets.

The FY06/07 budget combines the PAC-3/MEADS program based on a Milestone B decision, 1 July 2004. The Army revised the MEADS acquisition strategy to combine management, development, and fielding of both the MEADS and Patriot systems. The Patriot/MEADS Combined Aggregate Program (CAP) will provide for the evolution of the Patriot/PAC-3 system to the MEADS objective system through the early introduction of the MEADS Major End Items. This approach provides for earlier fielding of enhanced air and missile defense capabilities across the currently fielded force to counter the evolving threat and allow for the knowledge that was gained in the development and fielding of the Patriot System to be fused into the MEADS program. The PAC-3 missile is the baseline missile for the MEADS system. The Missile Segment Enhancement (MSE) missile, which provides for greater ranges, will be the objective missile for the system. The first year of procurement for the MSE missile, SSN C53101 (initial production facilitization) and the MEADS Ground Support Equipment, SSN C53201 (initial BMC4I) will begin in FY08.

**Justification:**

FY06/FY07 funding supports procurement of the 108 PAC-3 missiles each year.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>PATRIOT PAC-3 (C49200) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|---|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>  |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost   | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$000    | \$000   | Units | \$000    | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>Missile Hardware - Recurring</b>               |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Missile Hardware                                  |          | 410929   | 135   | 3044     | 329956  | 108   | 3055     | 338472              | 108   | 3134     | 336793                 | 108   | 3118     |
| Field Surveillance                                |          | 24276  |       |          | 19291   |       |          | 15519               |       |          | 21924                  |       |          |
| Obsolescence                                      |          | 8372   |       |          | 8504  |       |          | 7019                |       |          | 7249                   |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>443577</b>  |       |          | <b>357751</b>   |       |          | <b>361010</b>       |       |          | <b>365966</b>          |       |          |
| <b>Non-Recurring Costs</b>                        |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Initial Production Facilitization                 |          | 37974  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>37974</b>   |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Ground Support Equipment</b>                   |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Command Launch System                             |          | 26613  |       |          | 25360   |       |          | 24200               |       |          | 24200                  |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>26613</b>   |       |          | <b>25360</b>  |       |          | <b>24200</b>        |       |          | <b>24200</b>           |       |          |
| <b>Support Cost</b>                               |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Contractor Engineering                            |          | 36592  |       |          | 35624   |       |          | 35687               |       |          | 35942                  |       |          |
| Government/Software Engineering                   |          | 27419  |       |          | 26454   |       |          | 26504               |       |          | 26536                  |       |          |
| Sys Engrg/Proj Mgmt (SEPM)                        |          | 20776  |       |          | 19693   |       |          | 19755               |       |          | 19622                  |       |          |
| Integrated Logistics Support                      |          | 14191  |       |          | 12682   |       |          | 12744               |       |          | 12429                  |       |          |
| Depot Maint Plant Equipment (DMPE)                |          | 1500   |       |          | 1500  |       |          | 1500                |       |          | 1552                   |       |          |
| Fielding  |          | 8300   |       |          | 8300  |       |          | 8300                |       |          | 8507                   |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>108778</b>  |       |          | <b>104253</b>   |       |          | <b>104490</b>       |       |          | <b>104588</b>          |       |          |
| <b>Total</b>                                      |          | <b>616942</b>  |       |          | <b>487364</b>   |       |          | <b>489700</b>       |       |          | <b>494754</b>          |       |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 2 / Other missiles

Weapon System Type:

P-1 Line Item Nomenclature:  
Patriot PAC-3 (C49200)

| WBS Cost Elements:      | Contractor and Location | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery | QTY Each | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|-------------------------|-------------------------|--------------------------|-----------------|------------|------------------------|----------|--------------|------------------|------------------|----------------|
| <b>Missile Hardware</b> |                         |                          |                 |            |                        |          |              |                  |                  |                |
| FY 2003 MDA             | LMMFC<br>Dallas, TX     | SS/FPIS                  | AMCOM           | Dec 02     | May 04                 | 100      | 3727         | NA               |                  | Aug 02         |
| FY 2003 MDA             | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Sep 03     | May 05                 | 22       | 3182         | NA               |                  | Aug 03         |
| FY 2004                 | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Feb 04     | Jul 05                 | 135      | 3044         | NA               |                  | Aug 03         |
| FY 2005                 | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Jan 05     | May 06                 | 108      | 3055         | NA               |                  | Jun 04         |
| FY 2005 FMS (NL)        | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Jan 05     | Dec 06                 | 32       | 3180         | NA               |                  | Jun 04         |
| FY 2005 FMS (JA)        | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCPM           | Jan 05     | Jan 07                 | 16       | 3366         | NA               |                  | Jun 04         |
| FY 2006                 | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Dec 05     | May 07                 | 108      | 3134         | NA               |                  |                |
| FY 2007                 | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Dec 06     | May 08                 | 108      | 3118         | NA               |                  |                |
| FY 2008                 | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Dec 07     | May 09                 | 108      | 2985         | NA               |                  |                |
| FY 2009                 | LMMFC<br>Dallas, TX     | SS/FFP                   | AMCOM           | Dec 08     | May 10                 | 108      | 2968         | NA               |                  |                |

REMARKS: NL - Netherlands FMS Case (32 PAC-3 Missiles)  
JA - Japan FMS Case (16 PAC-3 Missiles)









# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No: P-1 Item Nomenclature  
Missile Procurement, Army /2/Other missiles STINGER SYSTEM SUMMARY (C18500)

Program Elements for Code B Items: Code: Other Related Program Elements: Stinger Mods (C20000)

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             | 139     |         |         |         |         |         |         |         |         |             | 139        |
| Gross Cost       | 803.8       | 25.4    | 2.9     |         |         |         |         |         |         |         |             | 832.1      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 803.8       | 25.4    | 2.9     |         |         |         |         |         |         |         |             | 832.1      |
| Initial Spares   | 0.8         |         |         |         |         |         |         |         |         |         |             | 0.8        |
| Total Proc Cost  | 804.6       | 25.4    | 2.9     |         |         |         |         |         |         |         |             | 832.9      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.2     |         |         |         |         |         |         |         |         |             |            |

**Description:**

Stinger is a lightweight, fire-and-forget, all-aspect, passive infrared/ultraviolet (IR/UV) homing missile. The Stinger Block I upgrade added enhanced processing capabilities, significantly improving the missile's terminal accuracy and performance against slow-moving and low-aspect targets, improving the missile's night capability, and increasing the infrared counter-counter measures (IRCCM) performance. The Stinger Block I missile incorporates the latest hardware and software modifications which increase the overall missile performance against low observable targets, cruise missiles and unmanned aerial vehicles. The Block I missile also resolves a key aviation deficiency by incorporating a Roll Frequency Sensor/Seeker that eliminates the need for super-elevation on aviation platforms. The Stinger Block I missile is compatible with all current and planned launch platforms, including Air-To-Air Stinger, Avenger, Bradley Linebacker and manportable, shoulder-fired applications. The Block I missile program also incorporates component redesign and replacement to address service life and obsolescence issues.

**Justification:**

FY04 funds final production support and deliveries of Stinger Block I.

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
STINGER BLK 1 (C18600)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

Stinger Mods (C20000)

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 2759        | 139     |         |         |         |         |         |         |         |         |             | 2898       |
| Gross Cost       | 803.8       | 25.4    | 2.9     |         |         |         |         |         |         |         |             | 832.1      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 803.8       | 25.4    | 2.9     |         |         |         |         |         |         |         |             | 832.1      |
| Initial Spares   | 0.8         |         |         |         |         |         |         |         |         |         |             | 0.8        |
| Total Proc Cost  | 804.6       | 25.4    | 2.9     |         |         |         |         |         |         |         |             | 832.9      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.2     |         |         |         |         |         |         |         |         |             |            |

**Description:**

Stinger is a lightweight, fire-and-forget, all-aspect, passive infrared/ultraviolet (IR/UV) homing missile. The Stinger Block I upgrade added enhanced processing capabilities, significantly improving the missile's terminal accuracy and performance against slow-moving and low-aspect targets, improving the missile's night capability, and increasing the infrared counter-counter measures (IRCCM) performance. The Stinger Block I missile incorporates the latest hardware and software modifications which increase the overall missile performance against low observable targets, cruise missiles and unmanned aerial vehicles. The Block I missile also resolves a key aviation deficiency by incorporating a Roll Frequency Sensor/Seeker that eliminates the need for super-elevation on aviation platforms. The Stinger Block I missile is compatible with all current and planned launch platforms, including Air-To-Air Stinger, Avenger, Bradley Linebacker and manportable, shoulder-fired applications. The Block I missile program also incorporates component redesign and replacement to address service life and obsolescence issues.

**Justification:**

FY04 funds final production support and deliveries of Stinger Block I Missiles.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles |             |         |         |         |   | P-1 Item Nomenclature<br>Surface-Launched AMRAAM System Summary: (C81001) |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---|---|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:<br>PE 0604802A, Project S23 |   |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006   | FY 2007   | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |   |   |         |         |         |         |             |            |
| Gross Cost  |             |         | 7.4     | 2.4     | 19.3  | 12.0  | 69.3    | 13.1    |         |         |             | 123.5      |
| Less PY Adv Proc  |             |         |         |         |   |   | 10.0    |         |         |         |             | 10.0       |
| Plus CY Adv Proc  |             |         |         |         |   | 10.0  |         |         |         |         |             | 10.0       |
| Net Proc (P-1)  |             |         | 7.4     | 2.4     | 19.3  | 22.0  | 59.3    | 13.1    |         |         |             | 123.5      |
| Initial Spares  |             |         |         |         |   |   |         |         |         |         |             |            |
| Total Proc Cost   |             |         | 7.4     | 2.4     | 19.3  | 22.0  | 59.3    | 13.1    |         |         |             | 123.5      |
| Flyaway U/C   |             |         |         |         |   |   |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |   |   |         |         |         |         |             |            |

**Description:**

Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is the initial outer tier interceptor component of the Extended Area Air Defense System (EAADS), a component of the Army's future Integrated Air & Missile Defense (IAMD) Task Forces. SLAMRAAM is a Missiles and Space (MS) System of Systems, consisting of a launcher platform, AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAMs), a common Army vehicle, launch rails, launcher electronics, on-board command, control, communications, and computer (C4) components, Sentinel (Enhanced Target Range and Classification) Sensor, other external Sensors, and an Integrated Fire Control Station (IFCS). SLAMRAAM is a lightweight, day or night, adverse weather, non-line-of-sight (NLOS) system for countering cruise missile (CM), low altitude rotary wing (RW), fixed wing (FW), unmanned aerial vehicle (UAV), and reconnaissance, surveillance, and target acquisition (RSTA) platforms. It supports clutter engagements in close combat areas where maneuvering forces and their supporting units operate. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km protecting maneuvering and stationary units, as well as protecting critical assets.

**Justification:**

FY06 funds will procure 35 AMRAAM Missiles. FY07 funds will procure 15 AMRAAM missiles and the launcher (including IFCS) material requiring long lead procurement for the FY08 end item procurement.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles | P-1 Item Nomenclature<br>Surface-Launched AMRAAM Launcher (C81002) |
|---|--|

|                                    |       |                                 |
|------------------------------------|-------|---------------------------------|
| Program Elements for Code B Items: | Code: | Other Related Program Elements: |
|------------------------------------|-------|---------------------------------|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         | 30      |         |         |         |             | 30         |
| Gross Cost       |             |         |         |         |         | 3.3     | 69.3    | 13.1    |         |         |             | 85.7       |
| Less PY Adv Proc |             |         |         |         |         |         | 10.0    |         |         |         |             | 10.0       |
| Plus CY Adv Proc |             |         |         |         |         | 10.0    |         |         |         |         |             | 10.0       |
| Net Proc (P-1)   |             |         |         |         |         | 13.3    | 59.3    | 13.1    |         |         |             | 85.7       |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         |         |         |         | 13.3    | 59.3    | 13.1    |         |         |             | 85.7       |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         | 1.9     |         |         |         |             |            |

**Description:**

Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is the initial outer tier interceptor component of the Extended Area Air Defense System (EAADS), a component of the Army's future Integrated Air & Missile Defense (IAMD) Task Forces. SLAMRAAM is a Missiles and Space (MS) System of Systems, consisting of a launcher platform, AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAMs), a common Army vehicle, launch rails, launcher electronics, on-board command, control, communications, and computer (C4) components, Sentinel (Enhanced Target Range and Classification) Sensor, other external Sensors, and an Integrated Fire Control Station (IFCS). Only the launcher and IFCS are funded under the PE (C81002). SLAMRAAM is a lightweight, day or night, adverse weather, non-line-of-sight (NLOS) system for countering cruise missile (CM), low altitude rotary wing (RW), fixed wing (FW), unmanned aerial vehicle (UAV), and reconnaissance, surveillance, and target acquisition (RSTA) platforms. It supports clutter engagements in close combat areas where maneuvering forces and their supporting units operate. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km protecting maneuvering and stationary units, as well as protecting critical assets.

**Justification:**

No FY06 procurement. FY07 starts the procurement of the SLAMRAAM Fire Unit and IFCS hardware long lead items.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |  | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |              |       | P-1 Line Item Nomenclature:<br>Surface-Launched AMRAAM Launcher (C81002) |              |       | Weapon System Type: |              |       | Date:<br>February 2005 |              |       |              |
|---|--|--|--------------|-------|--|--------------|-------|---------------------|--------------|-------|------------------------|--------------|-------|--------------|
| <b>MSLS<br/>Cost Elements</b>                     |  | ID<br>CD   | <b>FY 04</b> |       |  | <b>FY 05</b> |       |                     | <b>FY 06</b> |       |                        | <b>FY 07</b> |       |              |
|   |  |  | TotalCost    | Qty   | UnitCost   | TotalCost    | Qty   | UnitCost            | TotalCost    | Qty   | UnitCost               | TotalCost    | Qty   | UnitCost     |
|   |  |  | \$000        | Units | \$000  | \$000        | Units | \$000               | \$000        | Units | \$000                  | \$000        | Units | \$000        |
| <b>Non-Recurring Production</b>                   |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Fire Unit Modification                            |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| <b>Total Non Recurring Production</b>             |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| <b>Recurring Production Hardware</b>              |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Launcher Manufacturing                            |  |  |              |       |  |              |       |                     |              |       |                        |              |       | 6252         |
| IFCS Manufacturing                                |  |  |              |       |  |              |       |                     |              |       |                        |              |       | 3748         |
| Recurring Engineering                             |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Sustaining Tooling                                |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Quality Control                                   |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Engineering Change Proposals                      |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| <b>Total Hardware Cost</b>                        |  |  |              |       |  |              |       |                     |              |       |                        |              |       | <b>10000</b> |
| <b>Weapons Support Cost</b>                       |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| System Test and Evaluation                        |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| System Engineering/Program Management             |  |  |              |       |  |              |       |                     |              |       |                        |              |       | 3305         |
| Training Equipment                                |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Data  |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Support Equipment                                 |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| Fielding  |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| <b>Sub-Total Support Cost</b>                     |  |  |              |       |  |              |       |                     |              |       |                        |              |       | <b>3305</b>  |
| Initial Spares                                    |  |  |              |       |  |              |       |                     |              |       |                        |              |       |              |
| <b>Total</b>                                      |  |  |              |       |  |              |       |                     |              |       |                        |              |       | <b>13305</b> |

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |   |
|---|---|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles | P-1 Item Nomenclature<br>Surface-Launched AMRAAM Missile (C81004) |
|---|---|

|                                    |       |                                 |
|------------------------------------|-------|---------------------------------|
| Program Elements for Code B Items: | Code: | Other Related Program Elements: |
|------------------------------------|-------|---------------------------------|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         | 15      | 5       | 35      | 15      |         |         |         |         |             | 70         |
| Gross Cost       |             |         | 7.4     | 2.4     | 19.3    | 8.7     |         |         |         |         |             | 37.8       |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             |         | 7.4     | 2.4     | 19.3    | 8.7     |         |         |         |         |             | 37.8       |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         | 7.4     | 2.4     | 19.3    | 8.7     |         |         |         |         |             | 37.8       |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         | 0.5     | 0.5     | 0.6     | 0.6     |         |         |         |         |             |            |

**Description:**

The SLAMRAAM takes off-the-shelf USAF AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAM) and mounts the missiles on a common Army vehicle to enable surface-to-air engagements. The AIM-120 is a mature all-weather, radar-guided tri-service (Air Force, Marines, and Navy) missile, and has a well-established production program, integrated logistics support structure, and P3I program. The AIM-120 is a supersonic, air-launched guided missile employing active target tracking, proportional navigation guidance, and active radio frequency (RF) target detection. It employs inertial navigational methods of guidance to provide an autonomous launch and leave capability against simultaneous multiple targets in all environments.

**Justification:**

FY06 procures 35 AMRAAM Missiles. FY07 Procures 15 AMRAAM Missiles.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |  | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |              |       | P-1 Line Item Nomenclature:<br>Surface-Launched AMRAAM Missile (C81004) |              |       | Weapon System Type: |              |       | Date:<br>February 2005 |              |       |          |
|---|--|--|--------------|-------|---|--------------|-------|---------------------|--------------|-------|------------------------|--------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     |  | ID<br>CD   | <b>FY 04</b> |       |   | <b>FY 05</b> |       |                     | <b>FY 06</b> |       |                        | <b>FY 07</b> |       |          |
|   |  |  | TotalCost    | Qty   | UnitCost  | TotalCost    | Qty   | UnitCost            | TotalCost    | Qty   | UnitCost               | TotalCost    | Qty   | UnitCost |
|   |  |  | \$000        | Units | \$000   | \$000        | Units | \$000               | \$000        | Units | \$000                  | \$000        | Units | \$000    |
| <b>Missile Hardware Recurring</b>                 |  |  |              |       |   |              |       |                     |              |       |                        |              |       |          |
| Missile Round (incl warranty)                     |  |  | 7382         | 15    | 492   | 2433         | 5     | 487                 | 19281        | 35    | 551                    | 8650         | 15    | 577      |
| Containers  |  |  | 15           | 4     | 4   | 7            | 2     | 4                   | 34           | 9     | 4                      | 15           | 4     | 4        |
| <b>Total Missile Hardware Cost</b>                |  |  | <b>7397</b>  |       |   | <b>2440</b>  |       |                     | <b>19315</b> |       |                        | <b>8665</b>  |       |          |
| <b>Total</b>                                      |  |  | <b>7397</b>  |       |   | <b>2440</b>  |       |                     | <b>19315</b> |       |                        | <b>8665</b>  |       |          |

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |                                    | Weapon System Type:      |                 |            | P-1 Line Item Nomenclature:<br>Surface-Launched AMRAAM Missile (C81004) |           |              |                  |                  |                |
|--|------------------------------------|--------------------------|-----------------|------------|---|-----------|--------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location            | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery  | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>Missile Round (incl warranty)</b>   |                                    |                          |                 |            |   |           |              |                  |                  |                |
| FY 2004  | US Air Force JSPO<br>Eglin AFB, FL | MIPR                     | Eglin AFB, FL   | Dec-03     | Jun 06  | 15        | 492          | YES              |                  |                |
| FY 2005  | US Air Force JSPO<br>Eglin AFB, FL | MIPR                     | Eglin AFB, FL   | Jan-05     | Jun-07  | 5         | 487          | YES              |                  |                |
| FY 2006  | US Air Force JSPO<br>Eglin AFB, FL | MIPR                     | Eglin AFB, FL   | Dec-05     | Jun-08  | 35        | 551          | YES              |                  |                |
| FY 2007  | US Air Force JSPO<br>Eglin AFB, FL | MIPR                     | Eglin AFB, FL   | Dec-06     | Jun-09  | 15        | 577          | YES              |                  |                |

REMARKS:







# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles |             |         |         |         |   | P-1 Item Nomenclature<br>Surface-Launched AMRAAM System Summary:(Adv Proc) (C81001) |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---|---|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:<br>PE 0604802A, Project S23 |   |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006   | FY 2007   | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |   |   |         |         |         |         |             |            |
| Gross Cost  |             |         |         |         |   |   |         |         |         |         |             |            |
| Less PY Adv Proc  |             |         |         |         |   |   |         |         |         |         |             |            |
| Plus CY Adv Proc  |             |         |         |         |   | 10.0  |         |         |         |         |             | 10.0       |
| Net Proc (P-1)  |             |         |         |         |   | 10.0  |         |         |         |         |             | 10.0       |
| Initial Spares  |             |         |         |         |   |   |         |         |         |         |             |            |
| Total Proc Cost   |             |         |         |         |   | 10.0  |         |         |         |         |             | 10.0       |
| Flyaway U/C   |             |         |         |         |   |   |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |   |   |         |         |         |         |             |            |

**Description:**

Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is the initial outer tier interceptor component of the Extended Area Air Defense System (EAADS), a component of the Army's future Integrated Air & Missile Defense (IAMD) Task Forces. SLAMRAAM is a Missiles and Space (MS) System of Systems, consisting of a launcher platform, AIM-120 Advanced Medium Range Air-to-Air Missiles (AMRAAMs), a common Army vehicle, launch rails, launcher electronics, on-board command, control, communications, and computer (C4) components, Sentinel (Enhanced Target Range and Classification) Sensor, other external Sensors, and an Integrated Fire Control Station (IFCS). SLAMRAAM is a lightweight, day or night, adverse weather, non-line-of-sight (NLOS) system for countering cruise missile (CM), low altitude rotary wing (RW), fixed wing (FW), unmanned aerial vehicle (UAV), and reconnaissance, surveillance, and target acquisition (RSTA) platforms. It supports clutter engagements in close combat areas where maneuvering forces and their supporting units operate. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km protecting maneuvering and stationary units, as well as protecting critical assets.

**Justification:**

FY07 procures all GFE items requiring long lead for the FY08 launcher buy. End item procurement will be in the same fiscal year as the required Initial Operational Capability. 8 launchers are required for IOC, of which 4 will be refurbished units from the operational test program. The contractor will purchase material in FY07 for the 4 new launchers required to be delivered in FY08.

**Advance Procurement Requirements Analysis-Funding (P10A)**

First System Award Date:

First System Completion Date:

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
Surface-Launched AMRAAM System Summary:

(\$ in Millions)

|                                  | PLT<br>(mos) | When<br>Rqd<br>(mos) | Pr Yrs | FY 03 | FY 04 | FY 05 | FY 06 | FY 07 | FY 08 | FY 09 | FY 10 | FY 11 | To<br>Comp | Total |
|----------------------------------|--------------|----------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|-------|
| GFE Missile Launch Rails         | 18           | 6                    |        |       |       |       |       | 2.4   |       |       |       |       |            | 2.4   |
| GFE Comm Equip (Launcher)        | 18           | 6                    |        |       |       |       |       | 0.9   |       |       |       |       |            | 0.9   |
| GFE Comm Equip (IFCS)            | 18           | 6                    |        |       |       |       |       | 3.7   |       |       |       |       |            | 3.7   |
| Launcher Turret Assy Mat'l       | 10           |                      |        |       |       |       |       | 1.2   |       |       |       |       |            | 1.2   |
| Launcher Electronics CCAs        | 14           | 3                    |        |       |       |       |       | 0.1   |       |       |       |       |            | 0.1   |
| Launcher Mat'l                   | 10           |                      |        |       |       |       |       | 1.6   |       |       |       |       |            | 1.6   |
| <b>Total Advance Procurement</b> |              |                      | 0.0    | 0.0   | 0.0   | 0.0   | 0.0   | 10.0  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0        | 10.0  |

FY07 procures all GFE items requiring long lead for the FY08 buy. End item procurement will be in the same fiscal year as the required Initial Operational Capability. 8 launchers are required for IOC, of which 4 will be refurbished units from the operational test program. The contractor will purchase material in FY07 for the 4 new launchers required to be delivered in FY08.

**Advance Procurement Requirements Analysis-Funding (P10B)**

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
Surface-Launched AMRAAM System Summary:

(\$ in Millions)

|                                  | PLT<br>(mos) | Quantity<br>Per<br>Assembly | Unit<br>Cost | 2006 |                           |                       | 2007 |                           |                       |
|----------------------------------|--------------|-----------------------------|--------------|------|---------------------------|-----------------------|------|---------------------------|-----------------------|
|                                  |              |                             |              | Qty  | Contract<br>Forecast Date | Total<br>Cost Request | Qty  | Contract<br>Forecast Date | Total<br>Cost Request |
| End Item Quantity:               |              |                             |              |      |                           |                       |      |                           |                       |
| GFE Missile Launch Rails         | 18           | 6                           | 0.013        |      |                           |                       | 180  | Oct 06                    | 2.375                 |
| GFE Comm Equip (Launcher)        | 18           | 1                           | 0.031        |      |                           |                       | 30   | Oct 06                    | 0.937                 |
| GFE Comm Equip (IFCS)            | 18           | 1                           | 0.288        |      |                           |                       | 13   | Oct 06                    | 3.748                 |
| Launcher Turret Assy Mat'l       | 10           | 1                           | 0.306        |      |                           |                       | 4    | Nov 06                    | 1.225                 |
| Launcher Electronics CCAs        | 14           | 1                           | 0.023        |      |                           |                       | 4    | Nov 06                    | 0.090                 |
| Launcher Mat'l                   | 10           | 1                           | 0.406        |      |                           |                       | 4    | Nov 06                    | 1.625                 |
| <b>Total Advance Procurement</b> |              |                             |              |      |                           | 0.000                 |      |                           | 10.000                |

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
HELLFIRE SYS SUMMARY (C70000)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

PE 0203802A, Project 785

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             | 1797    |         | 900     | 760     |         |         |         |         |         |             | 3457       |
| Gross Cost       | 3917.9      | 191.1   | 24.9    | 108.1   | 80.1    |         |         |         |         |         |             | 4321.9     |
| Less PY Adv Proc | 34.8        | 9.5     |         |         |         |         |         |         |         |         |             | 44.3       |
| Plus CY Adv Proc | 44.3        |         |         |         |         |         |         |         |         |         |             | 44.3       |
| Net Proc (P-1)   | 3927.3      | 181.6   | 24.9    | 108.1   | 80.1    |         |         |         |         |         |             | 4321.9     |
| Initial Spares   | 5.7         |         |         |         |         |         |         |         |         |         |             | 5.7        |
| Total Proc Cost  | 3933.0      | 181.6   | 24.9    | 108.1   | 80.1    |         |         |         |         |         |             | 4327.6     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.1     |         | 0.1     | 0.1     |         |         |         |         |         |             |            |

**Description:**

The HELLFIRE family of air-to-ground missiles provides precision-kill capability to the Apache, Blackhawk and Kiowa Warrior helicopters against heavy, advanced armor and individual hard point targets. Laser HELLFIRE (A, C, F, K, M or N models) uses semi-active laser (SAL) terminal guidance. HELLFIRE II (K, M or N models) provides for point-target precision strike, defeats future advanced armor threat and non-armor targets, is effective against countermeasures, and is shipboard compatible. Longbow HELLFIRE (L model) is a millimeter wave, radar-aided inertial guidance missile that provides a fire-and-forget capability to engage targets both day and night, in adverse weather and with battlefield obscurants present. This capability will substantially increase the survivability of the AH-64D Longbow Apache helicopter. HELLFIRE II and Longbow HELLFIRE comprise the primary anti-tank armament of the AH-64 Apache, OH-58D Kiowa Warrior, and Special Operations helicopters. Production buys are scheduled to support training, testing, fielding and deployment of these aircraft.

**Justification:**

FY06 funds will procure 760 HELLFIRE II (K, M, or N models) missiles and support Longbow HELLFIRE disposal of tooling and test equipment.

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 49140       |         |         | 900     | 760     |         |         |         |         |         |             | 50800      |
| Gross Cost       | 2070.9      |         |         | 92.5    | 77.6    |         |         |         |         |         |             | 2241.0     |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 2070.9      |         |         | 92.5    | 77.6    |         |         |         |         |         |             | 2241.0     |
| Initial Spares   | 5.7         |         |         |         |         |         |         |         |         |         |             | 5.7        |
| Total Proc Cost  | 2076.6      |         |         | 92.5    | 77.6    |         |         |         |         |         |             | 2246.7     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         | 0.1     | 0.1     |         |         |         |         |         |             |            |

**Description:**

The Laser HELLFIRE family consists of the A, C, F, K, M and N model missiles. They are missiles that provide air-to-ground precision strike and are designed to defeat individual hard point targets. The missiles have the capability for modular guidance section replacement. Laser HELLFIRE uses semi-active laser terminal guidance and is the primary anti-tank armament of the AH-64 Apache, OH-58 Kiowa Warrior, and special operation helicopters. The F model missile (Interim HELLFIRE Warhead) was introduced with an improved warhead that improved lethality against near-term threat reactive armor. The HELLFIRE II includes hardening of the laser seeker against countermeasures, further warhead improvements for the long term, replacement of the mechanical fuze with an electrical fuze, and restoration of the original length and weight. The M and N models were developed and fielded to the US Marine Corps and utilize blast fragmentation and thermobaric warheads.

**Justification:**

FY 2006 funding procures 760 HELLFIRE II (K, M, or N model) missiles.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|---|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>  |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost   | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$000    | \$000   | Units | \$000    | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>Flyaway Costs</b>                              |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Hardware Costs - Recurring</b>                 |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| All-up Rounds                                     |          |  |       |          | 82754   | 900   | 92       | 65254               | 760   | 86       |                        |       |          |
| Gov Furn Eq (GFE) Explosives                      |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Gov Furn Eq (GFE) Containers                      |          |  |       |          | 1243  |       |          | 909                 |       |          |                        |       |          |
| Engineering Change Orders (ECO)                   |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Engineering Services                              |          |  |       |          | 1100  |       |          | 2200                |       |          |                        |       |          |
| Fielding  |          |  |       |          | 248   |       |          | 596                 |       |          |                        |       |          |
| Acceptance Testing                                |          |  |       |          | 2327  |       |          | 1568                |       |          |                        |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          | <b>87672</b>  |       |          | <b>70527</b>        |       |          |                        |       |          |
| <b>Engineering Support</b>                        |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Project Mgt Admin                                 |          |  |       |          | 3737  |       |          | 5231                |       |          |                        |       |          |
| Production Engineering Support                    |          |  |       |          | 1132  |       |          | 1796                |       |          |                        |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          | <b>4869</b>   |       |          | <b>7027</b>         |       |          |                        |       |          |
| <b>Non-Recurring</b>                              |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Disposal of Tool/test Equipment                   |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Initial Production Facilitization (IPF)           |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Rate tooling/Test Equipment                       |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Peculiar Support Equipment</b>                 |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Environmental Protections                         |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Subtotal  |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Gross P-1 End Item</b>                         |          |  |       |          | <b>92541</b>  |       |          | <b>77554</b>        |       |          |                        |       |          |
| Less: Prior Year Adv Proc                         |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Net P-1 Full Funding Cost</b>                  |          |  |       |          | <b>92541</b>  |       |          | <b>77554</b>        |       |          |                        |       |          |
| Plus: P-1 Cy Adv Proc                             |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Other Non P-1 Costs                               |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Initial Spares                                    |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Total</b>                                      |          |  |       |          | <b>92541</b>  |       |          | <b>77554</b>        |       |          |                        |       |          |

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |  | Weapon System Type:      |                             |            | P-1 Line Item Nomenclature:<br>LASER HELLFIRE MSL (BASIC/IHW/HFII) (C70100) |           |              |                  |                  |                |
|--|--|--------------------------|-----------------------------|------------|---|-----------|--------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location                    | Contract Method and Type | Location of PCO             | Award Date | Date of First Delivery  | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>All-up Rounds</b>   |  |                          |                             |            |   |           |              |                  |                  |                |
| FY 2005  | HELLFIRE Sys Limited Liability Orlando, FI | FFP                      | AMCOM, Redstone Arsenal, AI | Dec-04     | Dec-06  | 900       | 92           | Yes              |                  | Jul-04         |
| FY 2006  | HELLFIRE Sys Limited Liability Orlando, FI | FFP                      | AMCOM, Redstone Arsenal, AI | Dec-05     | Dec-07  | 760       | 86           | Yes              |                  | Jul-04         |

REMARKS:





# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles | P-1 Item Nomenclature<br>LONGBOW HELLFIRE/LBHF+ (C70300) |
|---|--|

|                                    |       |   |
|------------------------------------|-------|---|
| Program Elements for Code B Items: | Code: | Other Related Program Elements:<br>PE 0203802A, Project 785 |
|------------------------------------|-------|---|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 11108       | 1797    |         |         |         |         |         |         |         |         |             | 12905      |
| Gross Cost       | 1846.9      | 191.1   | 24.9    | 15.5    | 2.5     |         |         |         |         |         |             | 2080.9     |
| Less PY Adv Proc | 34.8        | 9.5     |         |         |         |         |         |         |         |         |             | 44.3       |
| Plus CY Adv Proc | 44.3        |         |         |         |         |         |         |         |         |         |             | 44.3       |
| Net Proc (P-1)   | 1856.4      | 181.6   | 24.9    | 15.5    | 2.5     |         |         |         |         |         |             | 2080.9     |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 1856.4      | 181.6   | 24.9    | 15.5    | 2.5     |         |         |         |         |         |             | 2080.9     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.1     |         |         |         |         |         |         |         |         |             |            |

**Description:**

Longbow HELLFIRE is a missile system that provides fire-and-forget capability to the Apache system. Longbow HELLFIRE provides a versatile capability to engage targets during both the day and night, in adverse weather, and with battlefield obscurants present. Longbow HELLFIRE's fire-and-forget capability and flexibility of engagement options provide a dramatic increase in lethality and survivability for the Apache system which complements the semi-active Laser HELLFIRE missile. The Longbow HELLFIRE missile contains a radio frequency guidance section, which provides a lock-on before launch (LOBL) or lock-on after launch (LOAL) capability, depending on target range and movement parameters. The Longbow HELLFIRE will not change the AH-64 mission or role, but will provide for increased aircraft survivability. All three Longbow program elements (Fire Control Radar, D Model Apache helicopter, and Longbow HELLFIRE missile) were deployed simultaneously and are fielded as a total system. Laser HELLFIRE and Longbow HELLFIRE are complementary; both are required on the modern battlefield.

**Justification:**

FY 06 funding supports Longbow HELLFIRE disposal of tooling and test equipment.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |      |          | P-1 Line Item Nomenclature:<br>LONGBOW HELLFIRE/LBHF+ (C70300) |      |          | Weapon System Type: |      |          | Date:<br>February 2005 |      |          |
|---|----------|--|------|----------|--|------|----------|---------------------|------|----------|------------------------|------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |      |          | <b>FY 05</b>   |      |          | <b>FY 06</b>        |      |          | <b>FY 07</b>           |      |          |
|   |          | TotalCost  | Qty  | UnitCost | TotalCost  | Qty  | UnitCost | TotalCost           | Qty  | UnitCost | TotalCost              | Qty  | UnitCost |
|   |          | \$000  | Each | \$000    | \$000  | Each | \$000    | \$000               | Each | \$000    | \$000                  | Each | \$000    |
| <b>Flyaway Costs</b>                              |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>Hardware Costs - Recurring</b>                 |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| All-Up-Rounds                                     |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Containers  |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Gv Furn Eq (GFE) Explosives                       |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Engineering Services                              |          | 1525   |      |          | 1646   |      |          |                     |      |          |                        |      |          |
| Engineering Change Orders-Motor Refit             |          | 1289   |      |          |  |      |          |                     |      |          |                        |      |          |
| Engineering Change Orders-HOJ/AJ                  |          | 1200   |      |          |  |      |          |                     |      |          |                        |      |          |
| Fielding  |          | 2306   |      |          | 2611   |      |          |                     |      |          |                        |      |          |
| Acceptance Testing                                |          | 4062   |      |          | 4001   |      |          |                     |      |          |                        |      |          |
| <b>SUBTOTAL</b>                                   |          | <b>10382</b>   |      |          | <b>8258</b>  |      |          |                     |      |          |                        |      |          |
| <b>Engineering Support</b>                        |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Project Mgt Admin                                 |          | 3945   |      |          | 3623   |      |          |                     |      |          |                        |      |          |
| Production Engineering Support                    |          | 4062   |      |          | 3634   |      |          |                     |      |          |                        |      |          |
| <b>SUBTOTAL</b>                                   |          | <b>8007</b>  |      |          | <b>7257</b>  |      |          |                     |      |          |                        |      |          |
| Tooling/Test Equipment                            |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Disposal of Tooling/Test Equipment                |          |  |      |          |  |      |          | 2519                |      |          |                        |      |          |
| Initial Production Facilitization (IPF)           |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Cost Reduction Program                            |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Rate Tooling/Test Equipment                       |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>SUBTOTAL</b>                                   |          |  |      |          |  |      |          | <b>2519</b>         |      |          |                        |      |          |
| <b>Peculiar Support Equipment</b>                 |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Environmental Protection Covers                   |          | 6486   |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>SUBTOTAL</b>                                   |          | <b>6486</b>  |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>Gross P-1 End Item</b>                         |          | <b>24875</b>   |      |          | <b>15515</b>   |      |          | <b>2519</b>         |      |          |                        |      |          |
| Less: Prior Year Adv Proc                         |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>Net P-1 Full Funding Cost</b>                  |          | <b>24875</b>   |      |          | <b>15515</b>   |      |          | <b>2519</b>         |      |          |                        |      |          |
| Plus: P-1 CY Adv Proc                             |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Other Non P-1 Costs                               |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Initial Spares                                    |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Mods  |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>Total</b>                                      |          | <b>24875</b>   |      |          | <b>15515</b>   |      |          | <b>2519</b>         |      |          |                        |      |          |

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |   | Weapon System Type:      |                           |            | P-1 Line Item Nomenclature:<br>LONGBOW HELLFIRE/LBHF+ (C70300) |          |                 |                  |                  |                |
|--|---|--------------------------|---------------------------|------------|--|----------|-----------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location                     | Contract Method and Type | Location of PCO           | Award Date | Date of First Delivery   | QTY Each | Unit Cost \$000 | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>All-Up-Rounds</b><br>FY 2003  | Longbow Limited Liability Co<br>Orlando, FL | FFP-M-5(5)               | AMCOM,Redstone Arsenal,AL | Dec-02     | Sep-04   | 1797     | 94              | Yes              |                  | Dec-97         |

REMARKS: Performance-based specifications are used in all production contracts.



# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
APKWS (Advanced Precision Kill Weapon System) (C70301)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

PE 0604802A, Project 705; 0203802A, Project 786

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         | 600     | 3000    | 3800    | 4100    | 4250    | 4250    | 51565       | 71565      |
| Gross Cost       |             |         |         | 0.7     | 34.1    | 88.4    | 98.2    | 113.1   | 105.7   | 105.6   | 1145.3      | 1691.1     |
| Less PY Adv Proc |             |         |         |         | 6.1     |         |         |         |         |         |             | 6.1        |
| Plus CY Adv Proc |             |         |         | 6.1     |         |         |         |         |         |         |             | 6.1        |
| Net Proc (P-1)   |             |         |         | 6.9     | 27.9    | 88.4    | 98.2    | 113.1   | 105.7   | 105.6   | 1145.3      | 1691.1     |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         |         | 6.9     | 27.9    | 88.4    | 98.2    | 113.1   | 105.7   | 105.6   | 1145.3      | 1691.1     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0         |            |

**Description:**

The Advanced Precision Kill Weapon System (APKWS) is a highly accurate weapon that will complement the HELLFIRE missile in precision strikes against soft point targets and provide improved accuracy over the current 2.75-inch munition used in the AH-64 Apache, OH-58 Kiowa Warrior, and the future force helicopters. Under the APKWS program, a laser guidance section for the 2.75 inch munition (M151 warhead, MK 66 motor) will be developed, tested, qualified and procured as a total system.

**Justification:**

FY 06 and FY 07 funding will procure 600 and 3000 APKWS, respectively.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>APKWS (Advanced Precision Kill Weapon<br>System) (C70301) |       |             | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|--|-------|-------------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>   |       |             | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost  | Qty   | UnitCost    | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$000    | \$000  | Units | \$000       | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>Flyaway Costs</b>                              |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| <b>Hardware Costs - Recurring</b>                 |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| All-up Rounds                                     |          |  |       |          |  |       |             | 22241               | 600   | 37       | 67155                  | 3000  | 22       |
| Engineering Services                              |          |  |       |          |  |       |             | 3330                |       |          | 4135                   |       |          |
| Fielding  |          |  |       |          |  |       |             | 1707                |       |          | 3342                   |       |          |
| Acceptance Testing                                |          |  |       |          |  |       |             | 1638                |       |          | 4068                   |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          |  |       |             | <b>28916</b>        |       |          | <b>78700</b>           |       |          |
| <b>Engineering Support</b>                        |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| Project Mgt Admin                                 |          |  |       |          |  |       |             | 3078                |       |          | 3442                   |       |          |
| Production Engineering Support                    |          |  |       |          |  |       |             | 2061                |       |          | 2559                   |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          |  |       |             | <b>5139</b>         |       |          | <b>6001</b>            |       |          |
| <b>Non-Recurring</b>                              |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| Disposal of Tool/Test Equipment                   |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| Initial Production Facilitization                 |          |  |       |          |  |       | 728         |                     |       |          |                        |       |          |
| Rate Tooling/Test Equipment                       |          |  |       |          |  |       |             |                     |       |          | 3661                   |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          |  |       | <b>728</b>  |                     |       |          | <b>3661</b>            |       |          |
| Peculiar Support Equipment                        |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| Environmental Protections                         |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| <b>SUBTOTAL</b>                                   |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| <b>Gross P-1 End Item</b>                         |          |  |       |          |  |       | <b>728</b>  | <b>34055</b>        |       |          | <b>88362</b>           |       |          |
| Less: Prior Year Adv Proc                         |          |  |       |          |  |       |             | 6124                |       |          |                        |       |          |
| <b>Net P-1 Full Funding Cost</b>                  |          |  |       |          |  |       | <b>728</b>  | <b>27931</b>        |       |          | <b>88362</b>           |       |          |
| Plus: P-1 CY Adv Proc                             |          |  |       |          |  |       | 6124        |                     |       |          |                        |       |          |
| Other Non P-1 Costs                               |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| Initial Spares                                    |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| Mods  |          |  |       |          |  |       |             |                     |       |          |                        |       |          |
| <b>Total</b>                                      |          |  |       |          |  |       | <b>6852</b> | <b>27931</b>        |       |          | <b>88362</b>           |       |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 2 / Other missiles

Weapon System Type:

P-1 Line Item Nomenclature:  
APKWS (Advanced Precision Kill Weapon System) (C70301)

| WBS Cost Elements:   | Contractor and Location            | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery | QTY Each | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|----------------------|------------------------------------|--------------------------|-----------------|------------|------------------------|----------|--------------|------------------|------------------|----------------|
| <b>All-up Rounds</b> |                                    |                          |                 |            |                        |          |              |                  |                  |                |
| FY 2006              | General Dynamics<br>Burlington, VT | FFP                      | AMCOM, RSA, AL* | Dec 05     | Dec 06                 | 600      | 37           | Yes              |                  | Oct-03         |
| FY 2007              | General Dynamics<br>Burlington, VT | FFP                      | AMCOM, RSA, AL  | Dec 06     | Dec 07                 | 3000     | 22           | Yes              |                  | Oct-03         |

REMARKS: \*Aviation and Missile Command, Redstone Arsenal, AL









# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
APKWS (Advanced Precision Kill Weapon System)(Adv Proc) (C70301)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       |             |         |         |         |         |         |         |         |         |         |             |            |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         | 6.1     |         |         |         |         |         |         |             | 6.1        |
| Net Proc (P-1)   |             |         |         | 6.1     |         |         |         |         |         |         |             | 6.1        |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         |         | 6.1     |         |         |         |         |         |         |             | 6.1        |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

The Advanced Precision Kill Weapon System (APKWS) is a highly accurate weapon that will complement the HELLFIRE missile in precision strikes against soft point targets and provide improved accuracy over the current 2.75-inch munition used in the AH-64 Apache, OH-58 Kiowa Warrior, and future force helicopters. Under the APKWS program, a laser guidance section for the 2.75 inch munition will be developed, tested, qualified and procured as a total system.

**Justification:**

FY05 funds are required for advance procurement of Long Lead Items to support APKWS production in FY06.

**Advance Procurement Requirements Analysis-Funding (P10A)**

First System Award Date:  
10 MAY 05

First System Completion Date:  
10 OCT 05

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
APKWS (Advanced Precision Kill Weapon System)

(\$ in Millions)

|   | PLT<br>(mos) | When<br>Rqd<br>(mos) | Pr Yrs | FY 03 | FY 04 | FY 05 | FY 06 | FY 07 | FY 08 | FY 09 | FY 10 | FY 11 | To<br>Comp | Total |
|---|--------------|----------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|-------|
| All-up Rounds:<br>Printed circuit boards<br>Resistors/capacitors/diodes<br>Microcircuits<br>Optics<br>Detectors<br>M151 HE warhead<br>M243 fuze<br>Mark 66 Mod 4 rocket motors<br>Marerials and components<br>Guidance Sections | 14           | 18                   |        |       |       | 6.1   |       |       |       |       |       |       |            | 6.1   |
| <b>Total Advance Procurement</b>  |              |                      | 0.0    | 0.0   | 0.0   | 6.1   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0        | 6.1   |

The advanced procurement required are the Long Lead Items necessary for manufacture of the APKWS to begin in FY 06.

**Advance Procurement Requirements Analysis-Funding (P10B)**

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
APKWS (Advanced Precision Kill Weapon System)

(\$ in Millions)

|                                  | PLT<br>(mos) | Quantity<br>Per<br>Assembly | Unit<br>Cost | 2006 |                           | 2007                  |     |                           |                       |
|----------------------------------|--------------|-----------------------------|--------------|------|---------------------------|-----------------------|-----|---------------------------|-----------------------|
|                                  |              |                             |              | Qty  | Contract<br>Forecast Date | Total<br>Cost Request | Qty | Contract<br>Forecast Date | Total<br>Cost Request |
| End Item Quantity:               |              |                             |              |      |                           |                       |     |                           |                       |
| All-up Rounds:                   | 14           |                             | 6.124        |      |                           |                       |     |                           |                       |
| Printed circuit boards           |              |                             |              |      |                           |                       |     |                           |                       |
| Resistors/capacitors/diodes      |              |                             |              |      |                           |                       |     |                           |                       |
| Microcircuits                    |              |                             |              |      |                           |                       |     |                           |                       |
| Optics                           |              |                             |              |      |                           |                       |     |                           |                       |
| Detectors                        |              |                             |              |      |                           |                       |     |                           |                       |
| M151 HE warhead                  |              |                             |              |      |                           |                       |     |                           |                       |
| M243 fuze                        |              |                             |              |      |                           |                       |     |                           |                       |
| Mark 66 Mod 4 rocket motors      |              |                             |              |      |                           |                       |     |                           |                       |
| Materials and components         |              |                             |              |      |                           |                       |     |                           |                       |
| <b>Total Advance Procurement</b> |              |                             |              |      |                           | 0.000                 |     |                           | 0.000                 |

The Long Lead Item request is for those materials/components that require more than a 12 month lead time for all-up round manufacture. No major end item is procured in advance of the all-up round. These items are required for the manufacture of the FY 06 all-up rounds.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No: Missile Procurement, Army /2/Other missiles  
 P-1 Item Nomenclature JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)

Program Elements for Code B Items: Code: Other Related Program Elements: PE 0604611A

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 17375       | 1478    | 991     | 1038    | 300     | 300     | 300     | 300     |         |         |             | 22082      |
| Gross Cost       | 2376.7      | 230.6   | 133.0   | 124.9   | 57.6    | 65.9    | 66.2    | 66.9    |         |         |             | 3121.8     |
| Less PY Adv Proc | 84.1        | 9.0     |         | 7.6     |         |         |         |         |         |         |             | 100.6      |
| Plus CY Adv Proc | 93.0        |         | 7.6     |         |         |         |         |         |         |         |             | 100.6      |
| Net Proc (P-1)   | 2385.7      | 221.7   | 140.6   | 117.3   | 57.6    | 65.9    | 66.2    | 66.9    |         |         |             | 3121.8     |
| Initial Spares   | 14.8        | 3.5     | 3.1     | 3.5     | 1.3     | 0.5     | 0.5     | 0.5     |         |         |             | 27.6       |
| Total Proc Cost  | 2400.4      | 225.1   | 143.6   | 120.9   | 58.9    | 66.4    | 66.7    | 67.4    |         |         |             | 3149.4     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.1     | 0.1     | 0.1     | 0.2     | 0.2     | 0.2     | 0.2     |         |         |             |            |

**Description:**

Javelin, a fire-and-forget system, is critical to the operation of the Army's combat force because of its precision strike, man-portability, high reliability, and capability to engage multiple types of targets (tanks, armored personnel carriers, bunkers, helicopter, walls, etc). These characteristics are key elements of the Army's move to a more versatile, deployable, lethal, survivable, and sustainable force. Javelin is the medium antitank system for infantry, scouts and combat engineers. These forces must have the capability to defeat armored forces. The Javelin, a replacement for the DRAGON, can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship or air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and multiple counter-measure conditions. The system's soft launch permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a launch tube assembly. The system also includes training devices for tactical training, classroom training, and handling exercises. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. The Javelin is capable of operating over 2.5 times the range of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system has a secondary mission of destroying bunkers and provides defensive capability against attacking/hovering helicopters. The CLU also has been used in a stand-alone mode for battlefield surveillance and target selection in recent conflicts.

**Justification:**

FY06/07 funds continue full rate production of Javelin missiles and Command Launch Units.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|---|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>  |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost   | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$000    | \$000   | Units | \$000    | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>Missile Hardware - Recurring</b>               |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| All Up Round                                      |          | 68779  | 901   | 76       | 79237   | 1038  | 76       | 23302               | 300   | 78       | 23719                  | 300   | 79       |
| All Up Round - Adjunct quantity                   |          | 6870   | 90    | 76       |   |       |          |                     |       |          |                        |       |          |
| Engineering Services                              |          | 4598   |       |          | 4869  |       |          | 2413                |       |          | 2927                   |       |          |
| Engineering Change Orders                         |          | 95   |       |          | 93  |       |          |                     |       |          |                        |       |          |
| Acceptance Testing                                |          | 4501   |       |          | 4767  |       |          | 2185                |       |          | 2201                   |       |          |
| Fielding  |          | 2650   |       |          | 2893  |       |          | 1251                |       |          | 1045                   |       |          |
| <b>Subtotal Missile Hardware</b>                  |          | <b>87493</b>   |       |          | <b>91859</b>  |       |          | <b>29151</b>        |       |          | <b>29892</b>           |       |          |
| <b>Procurement Support</b>                        |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Project Management                                |          | 7921   |       |          | 7481  |       |          | 6432                |       |          | 8292                   |       |          |
| Production Engineering                            |          | 4239   |       |          | 4218  |       |          | 3744                |       |          | 4746                   |       |          |
| Publications/Technical Data                       |          | 605  |       |          | 602   |       |          | 637                 |       |          | 690                    |       |          |
| <b>Subtotal Procurement Support</b>               |          | <b>12765</b>   |       |          | <b>12301</b>  |       |          | <b>10813</b>        |       |          | <b>13728</b>           |       |          |
| <b>Command &amp; Launch Hardware</b>              |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Command Launch Unit                               |          | 13310  | 120   | 111      | 13310   | 120   | 111      | 12260               | 107   | 115      | 15515                  | 133   | 117      |
| Engineering Services                              |          | 2476   |       |          | 1615  |       |          | 1038                |       |          | 1925                   |       |          |
| Engineering Change Orders                         |          | 15   |       |          | 12  |       |          |                     |       |          |                        |       |          |
| Fielding  |          | 3492   |       |          | 3098  |       |          | 1880                |       |          | 2159                   |       |          |
| <b>SubTotal C&amp;L Hardware</b>                  |          | <b>19293</b>   |       |          | <b>18035</b>  |       |          | <b>15178</b>        |       |          | <b>19599</b>           |       |          |
| <b>Training Devices</b>                           |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Field Tactical Trainer-Student Station            |          | 8960   | 140   | 64       | 2486  | 38    | 65       | 2482                | 38    | 65       | 2652                   | 38    | 70       |
| Basic Skills Trainer                              |          | 4095   | 59    | 69       |   |       |          |                     |       |          |                        |       |          |
| Missile Simulation Round                          |          | 348  | 196   | 2        | 267   | 150   | 2        |                     |       |          |                        |       |          |
| Fielding  |          |  |       |          |   |       |          | 12                  |       |          | 14                     |       |          |
| <b>SubTotal Training Devices</b>                  |          | <b>13403</b>   |       |          | <b>2753</b>   |       |          | <b>2494</b>         |       |          | <b>2666</b>            |       |          |
| <b>Gross P-1 End Cost</b>                         |          | <b>132954</b>  |       |          | <b>124948</b>   |       |          | <b>57636</b>        |       |          | <b>65885</b>           |       |          |
| Less: Prior Year Adv Proc                         |          |  |       |          | 7600  |       |          |                     |       |          |                        |       |          |
| <b>Net P-1 Full Funding Cost</b>                  |          | <b>132954</b>  |       |          | <b>117348</b>   |       |          | <b>57636</b>        |       |          | <b>65885</b>           |       |          |
| PLUS P-1 CY Adv. Proc.                            |          | 7600   |       |          |   |       |          |                     |       |          |                        |       |          |
| Initial Spares                                    |          | 3094   |       |          | 3516  |       |          | 1268                |       |          | 508                    |       |          |
| <b>Total</b>                                      |          | <b>143648</b>  |       |          | <b>120864</b>   |       |          | <b>58904</b>        |       |          | <b>66393</b>           |       |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 2 / Other missiles

Weapon System Type:

P-1 Line Item Nomenclature:  
JAVELIN (AAWS-M) SYSTEM SUMMARY (CC0007)

| WBS Cost Elements:         | Contractor and Location                   | Contract Method and Type | Location of PCO             | Award Date | Date of First Delivery | QTY Each | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|----------------------------|---|--------------------------|-----------------------------|------------|------------------------|----------|--------------|------------------|------------------|----------------|
| <b>All Up Round</b>        |   |                          |                             |            |                        |          |              |                  |                  |                |
| FY 2004                    | JV/All Up Round<br>Tucson, AZ/Orlando, FL | SS/FP                    | AMCOM, Redstone Arsenal, AL | Dec03      | Oct 05                 | 991      | 76           | Yes              |                  | 1098           |
| FY 2005                    | JV/All Up Round<br>Tucson, AZ/Orlando, FL | SS/FP                    | AMCOM, Redstone Arsenal, AL | Mar 05     | Oct 06                 | 1038     | 76           | Yes              |                  | 0503           |
| FY 2006                    | JV/All Up Round<br>Tucson, AZ/Orlando, FL | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 06     | Nov 07                 | 300      | 78           | Yes              |                  |                |
| FY 2007                    | JV/All Up Round<br>Tucson, AZ/Orlando, FL | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 07     | Nov 08                 | 300      | 79           | Yes              |                  |                |
| FY 2008                    | JV/All Up Round<br>Tucson, AZ/Orlando, FL | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 08     | Nov 09                 | 300      | 80           | Yes              |                  |                |
| FY 2009                    | JV/All Up Round<br>Tucson, AZ/Orlando, FL | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 09     | Nov 10                 | 300      | 82           | Yes              |                  |                |
| <b>Command Launch Unit</b> |   |                          |                             |            |                        |          |              |                  |                  |                |
| FY 2004                    | JV/CLU<br>Tucson,AZ/Orlando,FL            | SS/FP                    | AMCOM, Redstone Arsenal, AL | Dec 03     | Oct 05                 | 120      | 118          | Yes              |                  | 1098           |
| FY 2005                    | JV/CLU<br>Tucson,AZ/Orlando,FL            | SS/FP                    | AMCOM, Redstone Arsenal, AL | Mar 05     | Oct 06                 | 120      | 118          | Yes              |                  | 0503           |
| FY 2006                    | JV/CLU<br>Tucson,AZ/Orlando,FL            | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 06     | Nov 07                 | 107      | 105          | Yes              |                  |                |
| FY 2007                    | JV/CLU<br>Tucson,AZ/Orlando,FL            | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 07     | Nov 08                 | 133      | 109          | Yes              |                  |                |
| FY 2008                    | JV/CLU<br>Tucson,AZ/Orlando,FL            | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 08     | Nov 09                 | 133      | 118          | Yes              |                  |                |
| FY 2009                    | JV/CLU<br>Tucson,AZ/Orlando,FL            | SS/FP                    | AMCOM, Redstone Arsenal, AL | Jan 09     | Nov 10                 | 135      | 119          | Yes              |                  |                |

REMARKS: The Javelin Joint Venture (Raytheon/Lockheed Martin) is currently the proponent industry source. The contract method is Sole Source (SS) and the type is Fixed Price (FP).

















# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles |             |         |         |         |  | P-1 Item Nomenclature<br>JAVELIN (AAWS-M) SYSTEM SUMMARY(Adv Proc) (CC0007) |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|--|---|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:<br>PE 0604611A |   |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006  | FY 2007   | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |  |   |         |         |         |         |             |            |
| Gross Cost  |             |         |         |         |  |   |         |         |         |         |             |            |
| Less PY Adv Proc  |             |         |         |         |  |   |         |         |         |         |             |            |
| Plus CY Adv Proc  | 93.0        |         | 7.6     |         |  |   |         |         |         |         |             | 100.6      |
| Net Proc (P-1)  | 93.0        |         | 7.6     |         |  |   |         |         |         |         |             | 100.6      |
| Initial Spares  |             |         |         |         |  |   |         |         |         |         |             |            |
| Total Proc Cost   | 93.0        |         | 7.6     |         |  |   |         |         |         |         |             | 100.6      |
| Flyaway U/C   |             |         |         |         |  |   |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |  |   |         |         |         |         |             |            |

**Description:**

Javelin, a fire-and-forget system, is critical to the operational design of the Army's combat force because of its precision strike, man-portability, high reliability, and capability to engage multiple types of targets (tanks, armored personnel carriers, bunkers, helicopter, walls, etc). These characteristics are key elements of the Army's move to a more versatile, deployable, lethal, survivable, and sustainable force. Javelin is the medium antitank system for infantry, scouts and combat engineers. These forces must have the capability to defeat armored forces. The Javelin, a replacement for the DRAGON, can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship or air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and multiple counter-measure conditions. The system's soft launch permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a launch tube assembly. The system also includes training devices for tactical training, classroom training, and handling exercises. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. The Javelin is capable of operating over 2.5 times the range of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system has a secondary mission of destroying bunkers and provides defensive capability against attacking/hovering helicopters. The CLU also has been used in a stand-alone mode for battlefield surveillance and target selection in recent conflicts.

**Justification:**

FY04 funds support advance procurement to support FY05 full rate production for Javelin.

**Advance Procurement Requirements Analysis-Funding (P10A)**

First System Award Date:  
Mar 04

First System Completion Date:  
Mar 06

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
JAVELIN (AAWS-M) SYSTEM SUMMARY

(\$ in Millions)

|                                     | PLT<br>(mos) | When<br>Rqd<br>(mos) | Pr Yrs | FY 03 | FY 04 | FY 05 | FY 06 | FY 07 | FY 08 | FY 09 | FY 10 | FY 11 | To<br>Comp | Total |
|-------------------------------------|--------------|----------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|-------|
| End Item Quantity                   |              |                      |        |       | 1038  |       |       |       |       |       |       |       |            | 1038  |
| Advanced Procurement ITEMS          |              |                      |        |       |       |       |       |       |       |       |       |       |            |       |
| Launch Tube Assembly Componen       |              |                      |        |       | 0.5   |       |       |       |       |       |       |       |            | 0.5   |
| Propulsion Components               |              |                      |        |       | 1.6   |       |       |       |       |       |       |       |            | 1.6   |
| Missile/BCU Battery Components      |              |                      |        |       | 0.3   |       |       |       |       |       |       |       |            | 0.3   |
| Focal Plane Array Components        |              |                      |        |       | 3.4   |       |       |       |       |       |       |       |            | 3.4   |
| Control Acurator Sys. Components    |              |                      |        |       | 1.3   |       |       |       |       |       |       |       |            | 1.3   |
| Guidan. Electronics Unit Components |              |                      |        |       | 0.4   |       |       |       |       |       |       |       |            | 0.4   |
| Receptacle Cover Components         |              |                      |        |       | 0.1   |       |       |       |       |       |       |       |            | 0.1   |
| <b>Total Advance Procurement</b>    |              |                      | 0.0    | 0.0   | 7.6   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0        | 7.6   |

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles | P-1 Item Nomenclature<br>LINE OF SIGHT ANTI-TANK (LOSAT) SYSTEM SUM (H09000) |
|---|--|

|                                    |       |   |
|------------------------------------|-------|---|
| Program Elements for Code B Items: | Code: | Other Related Program Elements:<br>PE 0604819A, PE 0603654A |
|------------------------------------|-------|---|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         | 34      | 12      |         |         |         |         |         |         |             | 46         |
| Gross Cost       | 2.9         | 0.1     | 34.3    | 14.9    |         |         |         |         |         |         |             | 52.3       |
| Less PY Adv Proc |             | 0.1     |         |         |         |         |         |         |         |         |             | 0.1        |
| Plus CY Adv Proc | 0.1         |         |         |         |         |         |         |         |         |         |             | 0.1        |
| Net Proc (P-1)   | 3.0         |         | 34.3    | 14.9    |         |         |         |         |         |         |             | 52.3       |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 3.0         |         | 34.3    | 14.9    |         |         |         |         |         |         |             | 52.3       |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         | 1.0     | 1.2     |         |         |         |         |         |         |             |            |

**Description:**

Line-of-Sight Anti-Tank (LOSAT) and the Kinetic Energy Missile (KEM) technology provides light forces needed lethality and the foundation for the Future Force Kinetic Energy Missile integration. This program focuses on the integration of the LOSAT weapon system into a light, early deployable configuration in order to help remedy the urgent need for the early entry force lethality shortfall against heavy armor. The LOSAT weapon system consists of a KEM missile launcher mounted on a heavy High Mobility Multi-purpose Wheeled Vehicle (HMMWV) chassis. LOSAT offers a highly mobile, near-term, advanced capability for overwhelming armor destruction with a high rate of fire, increased range, and increased force survivability. LOSAT, deployed in the early entry force, will provide the decisive edge to win swiftly with minimum casualties and provides an assault support weapon capability. LOSAT is strategically and tactically deployable, giving commanders and decision makers greater flexibility. Once in theater, LOSAT is extremely mobile and can be air dropped or sling loaded under CH-47 and UH-60L aircraft. The performance of this hypervelocity kinetic energy missile (velocity of a mile per second) is not affected by the proliferation of emerging threat active protective systems and enhanced reactive armors, which are both rapidly becoming available on the global marketplace. LOSAT was initiated as a DoD-approved Advanced Concept Technology Demonstration (ACTD) program in FY 1998 to position the technology for future acquisition decisions; demonstrate subsystem capabilities in flight tests and dirty battlefield environments; evaluate the utility of the LOSAT technology for the early entry forces; demonstrate an integrated HMMWV-based LOSAT system, in-flight tests, and advanced war fighting experiments; and evaluate affordability issues. In December 1999, the Army and OSD funded the LOSAT accelerated advanced development and procurement, by adding additional design activities, reducing risk, completing system qualification testing, and adding additional Operational tests to support transition to limited production of the LOSAT Weapon System.

**Justification:**

FY05 funding procures 12 LOSAT missiles.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No: Missile Procurement, Army /2/Other missiles  
 P-1 Item Nomenclature LOSAT MISSILE (H09100)

Program Elements for Code B Items: Code: Other Related Program Elements: PE 0604819A, PE 0603654A

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         | 34      | 12      |         |         |         |         |         |         |             | 46         |
| Gross Cost       | 2.9         | 0.1     | 34.3    | 14.9    |         |         |         |         |         |         |             | 52.3       |
| Less PY Adv Proc |             | 0.1     |         |         |         |         |         |         |         |         |             | 0.1        |
| Plus CY Adv Proc | 0.1         |         |         |         |         |         |         |         |         |         |             | 0.1        |
| Net Proc (P-1)   | 3.0         |         | 34.3    | 14.9    |         |         |         |         |         |         |             | 52.3       |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 3.0         |         | 34.3    | 14.9    |         |         |         |         |         |         |             | 52.3       |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         | 1.0     | 1.2     |         |         |         |         |         |         |             |            |

**Description:**

Line-of-Sight Anti-Tank (LOSAT) and the Kinetic Energy Missile (KEM) technology provides light forces needed lethality and the foundation for the Future Force Kinetic Energy Missile integration. This program focuses on the integration of the LOSAT weapon system into a light, early deployable configuration in order to help remedy the urgent need for the early entry force lethality shortfall against heavy armor. The LOSAT weapon system consists of a KEM launcher mounted on a heavy High Mobility Multi-purpose Wheeled Vehicle (HMMWV) chassis. LOSAT offers a highly mobile, near-term, advanced capability for overwhelming armor destruction with a high rate of fire, increased range, and increased force survivability. LOSAT, deployed in the early entry force, will provide the decisive edge to win swiftly with minimum casualties and provides an assault support weapon capability. LOSAT is strategically and tactically deployable, giving commanders and decision makers greater flexibility. Once in theater, LOSAT is extremely mobile and can be air-dropped or sling loaded under CH-47 and UH-60L aircraft. The performance of this hypervelocity kinetic energy missile (velocity of a mile per second) is not affected by the proliferation of emerging threat active protective systems and enhanced reactive armors, which are both rapidly becoming available on the global marketplace. LOSAT was initiated as a DoD-approved Advanced Concept Technology Demonstration (ACTD) program in FY 1998 to position the technology for future acquisition decisions; demonstrate subsystem capabilities in flight tests and dirty battlefield environments; evaluate the utility of the LOSAT technology for the early entry forces; demonstrate an integrated HMMWV-based LOSAT system, in-flight tests, and advanced war fighting experiments; and evaluate affordability issues. In December 1999, the Army and OSD funded the LOSAT accelerated advanced development and procurement by adding additional design activities, reducing risk, completing system qualification testing, and adding additional Operational tests to support transition to limited production of the LOSAT Weapon System.

**Justification:**

FY05 funding procures 12 LOSAT missiles.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>LOSAT MISSILE (H09100) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|---|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>  |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost   | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$000    | \$000   | Units | \$000    | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>Missile (MSL) Hardware</b>                     |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Missiles (Hardware)                               |          | 15164  | 34    | 446      | 5328  | 12    | 444      |                     |       |          |                        |       |          |
| Missile Production Spt.                           |          | 7249   |       |          | 4618  |       |          |                     |       |          |                        |       |          |
| Engineering services Msl                          |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Subtotal Missile Hardware</b>                  |          | <b>22413</b>   |       |          | <b>9946</b>   |       |          |                     |       |          |                        |       |          |
| <b>Fire Unit (FU) Hardware</b>                    |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Launch Unit New                                   |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Launch Unit Refurb                                |          | 10268  | 12    | 856      |   |       |          |                     |       |          |                        |       |          |
| Gov't Furnished Equipment                         |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Engineering Services FU                           |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Fielding  |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Subtotal FU Hardware</b>                       |          | <b>10268</b>   |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Procurement Support</b>                        |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Project Management                                |          | 1660   |       |          | 1000  |       |          |                     |       |          |                        |       |          |
| Production Engineering                            |          |  |       |          | 1315  |       |          |                     |       |          |                        |       |          |
| Gov't Furnished Equipment                         |          |  |       |          | 2456  |       |          |                     |       |          |                        |       |          |
| Test and Evaluation                               |          |  |       |          | 225   |       |          |                     |       |          |                        |       |          |
| Pubs/Tech Data                                    |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Sub Total</b>                                  |          | <b>1660</b>  |       |          | <b>4996</b>   |       |          |                     |       |          |                        |       |          |
| <b>Training Devices</b>                           |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Training Devices                                  |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Sub Total</b>                                  |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Other Cost</b>                                 |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Less Prior Year Adv Proc                          |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Other Non P-1 Costs                               |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Total Other Cost</b>                           |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| <b>Total</b>                                      |          | <b>34341</b>   |       |          | <b>14942</b>  |       |          |                     |       |          |                        |       |          |

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |                         | Weapon System Type:      |                 |            | P-1 Line Item Nomenclature:<br>LOSAT MISSILE (H09100) |           |              |                  |                  |                |
|--|-------------------------|--------------------------|-----------------|------------|---|-----------|--------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery                                | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>Missiles (Hardware)</b>   |                         |                          |                 |            |   |           |              |                  |                  |                |
| FY 2004  | LMMFC<br>DALLAS, TX     | FFP                      | AMCOM           | NOV 05     | FEB 07  | 34        | 446          | YES              |                  | MAR '05        |
| FY 2005  | LMMFC<br>DALLAS, TX     | FFP                      | AMCOM           | NOV 05     | OCT 07  | 12        | 444          | YES              |                  | MAR '05        |

REMARKS: LOCKHEED MARTIN MISSILE AND FIRE CONTROL (LMMFC)





# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles |             |         |         |         |                                 | P-1 Item Nomenclature<br>TOW 2 SYSTEM SUMMARY (C59300) |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---------------------------------|--|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements: |  |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006                         | FY 2007  | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         | 200     | 500     | 800                             | 1698   | 1208    | 425     |         |         |             | 4831       |
| Gross Cost  | 1859.9      |         | 10.8    | 25.7    | 44.0                            | 50.5   | 87.6    | 36.4    |         |         |             | 2114.9     |
| Less PY Adv Proc  | 16.1        |         |         | 12.9    | 16.8                            | 18.9   | 22.7    | 10.0    |         |         |             | 97.5       |
| Plus CY Adv Proc  | 16.1        |         | 16.4    | 13.4    | 18.9                            | 32.7   |         |         |         |         |             | 97.5       |
| Net Proc (P-1)  | 1859.9      |         | 27.2    | 26.1    | 46.1                            | 64.3   | 64.9    | 26.4    |         |         |             | 2114.9     |
| Initial Spares  |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Total Proc Cost   | 1859.9      |         | 27.2    | 26.1    | 46.1                            | 64.3   | 64.9    | 26.4    |         |         |             | 2114.9     |
| Flyaway U/C   |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         | 0.1     | 0.1     | 0.1                             | 0.0  | 0.1     | 0.1     |         |         |             |            |

**Description:**

The TOW 2B missile (TOW: Tube-launched, Optically-tracked, Wire command-link guided) provides the heavy anti-armor/assault capability for the Army's Light Early-Entry Contingency Forces, the Stryker Brigade Combat Teams (BCT), and the Bradley equipped Mechanized Infantry. TOW 2B is also the primary heavy anti-armor missile for the U.S. Marine Corps and Allied nations. The TOW 2B missile defeats all known and projected threat armor systems including those equipped with advanced armor, explosive reactive armor (ERA), and active protection systems (APS). TOW 2B utilizes dual warheads configured for top-attack to defeat threat armor systems at their most vulnerable point. The TOW 2B missile incorporates Counter Active Protection Systems(CAPS) enabling it to counter all current and projected threat APS. Incorporation of a new aerodynamic nose and additional wire extends the range of the TOW 2B. Soldiers also employ TOW 2B in a secondary role against buildings and field fortifications taking advantage of the missile's inherent assault capability against such targets. The TOW 2B missile is launched from a variety of combat systems in the active Army and Army National Guard including the Improved Target Acquisition System (ITAS), all infantry and cavalry variants of Bradley Fighting Vehicle Systems (BFVS), the Stryker ATGM Light Armored Vehicle (LAV), the M220A2 TOW 2 launcher, and the M901A1 Improved TOW Vehicles. The United States Marine Corp (USMC) employs the TOW 2B missile from its M220A2 launchers, ATGM - LAV, and AH-1 Cobra helicopters. The TOW 2B missile provides the warfighter with a highly lethal, cost effective, interoperable, multi-purpose weapon capable of defeating all known and projected threat armor systems well into this century.

**Justification:**

FY06 funds the third year of a three-year multi-year contract for TOW Missiles. FY07 funds the first year of a three-year multi-year contract for TOW Missiles.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles | P-1 Item Nomenclature<br>TOW 2 MISSLE (BGM-71D)(6") (C59403) |
|---|--|

|                                    |       |                                 |
|------------------------------------|-------|---------------------------------|
| Program Elements for Code B Items: | Code: | Other Related Program Elements: |
|------------------------------------|-------|---------------------------------|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 144783      |         | 200     | 500     | 800     | 1698    | 1208    | 425     |         |         |             | 149614     |
| Gross Cost       | 1859.9      |         | 10.8    | 25.7    | 44.0    | 50.5    | 87.6    | 36.4    |         |         |             | 2114.9     |
| Less PY Adv Proc | 16.1        |         |         | 12.9    | 16.8    | 18.9    | 22.7    | 10.0    |         |         |             | 97.5       |
| Plus CY Adv Proc | 16.1        |         | 16.4    | 13.4    | 18.9    | 32.7    |         |         |         |         |             | 97.5       |
| Net Proc (P-1)   | 1859.9      |         | 27.2    | 26.1    | 46.1    | 64.3    | 64.9    | 26.4    |         |         |             | 2114.9     |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 1859.9      |         | 27.2    | 26.1    | 46.1    | 64.3    | 64.9    | 26.4    |         |         |             | 2114.9     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         | 0.1     | 0.1     | 0.1     | 0.0     | 0.1     | 0.1     |         |         |             |            |

**Description:**

The TOW 2B missile (TOW: Tube-launched, Optically-tracked, Wire command-link guided) provides the heavy anti-armor/assault capability for the Army's Light Early-Entry Contingency Forces, the Stryker Brigade Combat Teams (BCT), and the Bradley equipped Mechanized Infantry. TOW 2B is also the primary heavy anti-armor missile for the U.S. Marine Corps and Allied nations. The TOW 2B missile defeats all known and projected threat armor systems including those equipped with advanced armor, explosive reactive armor (ERA), and active protection systems (APS). TOW 2B utilizes dual warheads configured for top-attack to defeat threat armor systems at their most vulnerable point. The TOW 2B missile incorporates Counter Active Protection Systems (CAPS) enabling it to counter all current and projected threat APS. Incorporation of a new aerodynamic nose and additional wire extends the range of the TOW 2B. Soldiers also employ TOW 2B in a secondary role against buildings and field fortifications taking advantage of the missile's inherent assault capability against such targets. The TOW 2B missile is launched from a variety of combat systems in the active Army and Army National Guard including the Improved Target Acquisition System (ITAS), all infantry and cavalry variants of Bradley Fighting Vehicle Systems (BFVS), the Stryker ATGM Light Armored Vehicle (LAV), the M220A2 TOW 2 launcher, and the M901A1 Improved TOW Vehicles. The United States Marine Corp (USMC) employs the TOW 2B missile from its M220A2 launchers, ATGM - LAV, and AH-1 Cobra helicopters. The TOW 2B missile provides the warfighter with a highly lethal, cost effective, interoperable, multi-purpose weapon capable of defeating all known and projected threat armor systems well into this century.

**Justification:**

FY06 funds the third year of a three-year multi-year contract. FY07 funds the first year of a three-year multi-year contract.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b>   |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>TOW 2 MISSLE (BGM-71D)(6") (C59403) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|--|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                       | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>   |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost  | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$000    | \$000  | Units | \$000    | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>Missile Hardware - Recurring</b>                 |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Missile Contract                                    |          | 9600   | 200   | 48       | 24000  | 500   | 48       | 38400               | 800   | 48       | 42088                  | 1698  | 25       |
| Engineering Services                                |          | 65   |       |          | 1221   |       |          | 2186                |       |          | 2546                   |       |          |
| Acceptance Testing                                  |          | 100  |       |          | 392  |       |          | 753                 |       |          | 867                    |       |          |
| <b>SubTotal Missile Hardware</b>                    |          | <b>9765</b>  |       |          | <b>25613</b>   |       |          | <b>41339</b>        |       |          | <b>45501</b>           |       |          |
| <b>Engineering Support</b>                          |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Project Mgt Admin                                   |          | 1050   |       |          | 98   |       |          | 2663                |       |          | 4987                   |       |          |
| <b>SubTotal Engineering Support</b>                 |          | <b>1050</b>  |       |          | <b>98</b>  |       |          | <b>2663</b>         |       |          | <b>4987</b>            |       |          |
| <b>Non-Recurring Costs</b>                          |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| <b>SubTotal Non-Recurring Costs</b>                 |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| <b>Total Flyaway</b>                                |          | <b>10815</b>   |       |          | <b>25711</b>   |       |          | <b>44002</b>        |       |          | <b>50488</b>           |       |          |
| <b>Support Costs</b>                                |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Peculiar Support Equipment<br>Training Device (B/S) |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| <b>SubTotal Support Costs</b>                       |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Gross P-1 End Cost                                  |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Less: Prior Year Adv Proc                           |          |  |       |          | 12946  |       |          | 16795               |       |          | 18900                  |       |          |
| Net P-1 Full Funding Cost                           |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| PLUS P-1 CY Adv. Proc.                              |          | 16366  |       |          | 13375  |       |          | 18900               |       |          | 32700                  |       |          |
| Other Non P-1 Costs                                 |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Initial Spares                                      |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| MODS  |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| <b>Total</b>  |          | <b>27181</b>   |       |          | <b>26140</b>   |       |          | <b>46107</b>        |       |          | <b>64288</b>           |       |          |

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |                         | Weapon System Type:      |                             |            | P-1 Line Item Nomenclature:<br>TOW 2 MISSILE (BGM-71D) (6") (C59403) |           |              |                  |                  |                |
|--|-------------------------|--------------------------|-----------------------------|------------|--|-----------|--------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location | Contract Method and Type | Location of PCO             | Award Date | Date of First Delivery   | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>Missile Contract</b>  |                         |                          |                             |            |  |           |              |                  |                  |                |
| FY 2004  | Raytheon Tucson, AZ     | MY1/FFP                  | AMCOM, Redstone Arsenal, AL | Feb 04     | May 06   | 200       | 48           | Yes              |                  |                |
| FY 2005  | Raytheon Tucson, AZ     | MY1/FFP                  | AMCOM, Redstone Arsenal, AL | Nov 04     | May 06   | 500       | 48           | Yes              |                  |                |
| FY 2006  | Raytheon Tucson, AZ     | MY1/FFP                  | AMCOM, Redstone Arsenal, AL | Oct 05     | Sep 06   | 800       | 48           | Yes              |                  |                |
| FY 2007  | Raytheon Tucson, AZ     | MY2/FFP                  | AMCOM, Redstone Arsenal, AL | Oct 06     | Feb 08   | 1698      | 25           | Yes              |                  |                |

REMARKS: Raytheon is currently the only industry source that is both facilitized and qualified to produce the TOW 2B tactical missiles.

Remainder of FY07 unit cost is included in Advanced Procurement.

Multi-Year(MY)  
Firm Fixed Price(FFP)  
Army Missile Command(AMCOM)







# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles |             |         |         |         |                                 | P-1 Item Nomenclature<br>TOW 2 SYSTEM SUMMARY(Adv Proc) (C59300) |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---------------------------------|--|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements: |  |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006                         | FY 2007  | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Gross Cost  |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Less PY Adv Proc  |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Plus CY Adv Proc  | 16.1        |         | 16.4    | 13.4    | 18.9                            | 32.7   |         |         |         |         |             | 97.5       |
| Net Proc (P-1)  | 16.1        |         | 16.4    | 13.4    | 18.9                            | 32.7   |         |         |         |         |             | 97.5       |
| Initial Spares  |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Total Proc Cost   | 16.1        |         | 16.4    | 13.4    | 18.9                            | 32.7   |         |         |         |         |             | 97.5       |
| Flyaway U/C   |             |         |         |         |                                 |  |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |                                 |  |         |         |         |         |             |            |

**Description:**

The TOW 2B missile (TOW: Tube-launched, Optically-tracked, Wire command-link guided) provides the heavy anti-armor/assault capability for the Army's Light Early-Entry Contingency Forces, the Stryker Brigade Combat Teams (BCT), and the Bradley equipped Mechanized Infantry. TOW 2B is also the primary heavy anti-armor missile for the U.S. Marine Corps and Allied nations. The TOW 2B missile defeats all known and projected threat armor systems including those equipped with advanced armor, explosive reactive armor (ERA), and active protection systems (APS). TOW 2B utilizes dual warheads configured for top-attack to defeat threat armor systems at their most vulnerable point. The TOW 2B missile incorporates Counter Active Protection Systems (CAPS) enabling it to counter all current and projected threat APS. Incorporation of a new aerodynamic nose and additional wire extends the range of the TOW 2B. Soldiers also employ TOW 2B in a secondary role against buildings and field fortifications taking advantage of the missile's inherent assault capability against such targets. The TOW 2B missile is launched from a variety of combat systems in the active Army and Army National Guard including the Improved Target Acquisition System (ITAS), all infantry and cavalry variants of Bradley Fighting Vehicle Systems (BFVS), the Stryker ATGM Light Armored Vehicle (LAV), the M220A2 TOW 2 launcher, and the M901A1 Improved TOW Vehicles. The USMC employs the TOW 2B missile from its M220A2 launchers, ATGM - LAV, and AH-1 Cobra helicopters. The TOW 2B missile provides the warfighter with a highly lethal, cost effective, inter-operable, multi-purpose weapon capable of defeating all known and projected threat armor systems well into this century.

**Justification:**

FY06/07 funds advance procurement for Economic Order Quantity (EOQ) to support a 3-year multi-year production contract for TOW missiles to maintain an effective heavy anti-armor/assault capability.

**Advance Procurement Requirements Analysis-Funding (P10A)**

First System Award Date:  
Mar 04

First System Completion Date:  
May 06

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
TOW 2 SYSTEM SUMMARY

(\$ in Millions)

|                                  | PLT<br>(mos) | When<br>Rqd<br>(mos) | Pr Yrs | FY 03 | FY 04 | FY 05 | FY 06 | FY 07 | FY 08 | FY 09 | FY 10 | FY 11 | To<br>Comp | Total |
|----------------------------------|--------------|----------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|-------|
| End Item Quantity                |              |                      | 620    |       | 632   | 519   | 729   | 1262  |       |       |       |       |            | 3762  |
| EOQ ITEMS                        |              |                      |        |       |       |       |       |       |       |       |       |       |            |       |
| Propulsion Components            |              |                      | 0.8    |       | 0.8   | 0.7   | 1.0   | 1.7   |       |       |       |       |            | 5.0   |
| Warhead Assembly Components      |              |                      | 11.5   |       | 11.7  | 9.5   | 13.5  | 23.3  |       |       |       |       |            | 69.5  |
| Guidance & Electronics           |              |                      | 2.4    |       | 2.5   | 2.0   | 2.9   | 4.9   |       |       |       |       |            | 14.7  |
| Airframe Components              |              |                      | 1.4    |       | 1.4   | 1.1   | 1.6   | 2.8   |       |       |       |       |            | 8.3   |
| <b>Total Advance Procurement</b> |              |                      | 16.1   | 0.0   | 16.4  | 13.4  | 18.9  | 32.7  | 0.0   | 0.0   | 0.0   | 0.0   | 0.0        | 97.5  |

FY04/05 Advanced Procurement supports three year multiyear (FY04-FY06) to procure total of 1,500 TOW2 Missiles.

FY06/07 Advanced Procurement supports three year multiyear (FY07-FY09) to procure total of 3,331 TOW2 Missiles.

**Advance Procurement Requirements Analysis-Funding (P10B)**

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Line Item Nomenclature / Weapon System  
TOW 2 SYSTEM SUMMARY

(\$ in Millions)

|                                  | PLT<br>(mos) | Quantity<br>Per<br>Assembly | Unit<br>Cost | 2006 |                           |                       | 2007 |                           |                       |
|----------------------------------|--------------|-----------------------------|--------------|------|---------------------------|-----------------------|------|---------------------------|-----------------------|
|                                  |              |                             |              | Qty  | Contract<br>Forecast Date | Total<br>Cost Request | Qty  | Contract<br>Forecast Date | Total<br>Cost Request |
| End Item Quantity:               |              |                             |              | 729  |                           |                       | 1262 |                           |                       |
| EOQ ITEMS                        |              |                             |              |      | Oct 05                    |                       |      | Oct 06                    |                       |
| Propulsion Components            |              | 1                           |              | 729  |                           | 0.971                 | 1262 |                           | 1.681                 |
| Warhead Assembly Components      |              | 1                           |              | 729  |                           | 13.474                | 1262 |                           | 23.313                |
| Guidance & Electronics           |              | 1                           |              | 729  |                           | 2.851                 | 1262 |                           | 4.930                 |
| Airframe Components              |              | 1                           |              | 729  |                           | 1.604                 | 1262 |                           | 2.776                 |
| <b>Total Advance Procurement</b> |              |                             |              |      |                           | 18.900                |      |                           | 32.700                |

Advanced Procurement supports three year multiyear (FY07-09) to procure total of 3331 TOW 2 missiles.

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
Guided MLRS Rocket (GMLRS) (C64400)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

C65404, C65406, PE 0603778A, Projects 784/789

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             | 822     | 786     | 954     | 1026    | 1542    | 2916    | 4680    | 5988    | 7740    | 113550      | 140004     |
| Gross Cost       |             | 130.3   | 106.8   | 111.9   | 124.8   | 185.1   | 319.3   | 458.3   | 569.2   | 709.4   | 10487.9     | 13202.9    |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             | 130.3   | 106.8   | 111.9   | 124.8   | 185.1   | 319.3   | 458.3   | 569.2   | 709.4   | 10487.9     | 13202.9    |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             | 130.3   | 106.8   | 111.9   | 124.8   | 185.1   | 319.3   | 458.3   | 569.2   | 709.4   | 10487.9     | 13202.9    |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.2     | 0.1     | 0.1     | 0.1     | 0.1     | 0.1     | 0.1     | 0.1     | 0.1     | 0.1         |            |

### Description:

The Guided Multiple Launch Rocket System (GMLRS) is the Army's primary precision strike, artillery rocket system. Coupled with the High Mobility Artillery rocket System (HIMARS) launcher platform, the GMLRS provides the joint warfighter with unprecedented expeditionary capability as a highly mobile, rapidly deployable, precision guided munition with a reduced logistics burden effective against: cannon, mortar, rocket and missile artillery; air defense; light materiel; personnel; and point surface targets with predictable collateral damage. GMLRS is a major upgrade/replacement for the aging M26A1/A2 inventory. GMLRS integrates a guidance and control package and a new rocket motor that has achieved greater range and precision accuracy requiring fewer rockets to defeat targets than current artillery rockets, thereby reducing the logistics burden. In addition to HIMARS, the GMLRS will also be the primary precision strike munition for artillery units fielded with the M270A1 launcher. There are two variants of GMLRS--GMLRS with Dual Purpose Improved Conventional Munitions (DPICM) and GMLRS with a 200-pound class high explosive warhead (Unitary). The GMLRS DPICM is a five nation cooperative program among France, Germany, Italy, United Kingdom and the United States. The GMLRS Unitary is a modification to the GMLRS DPICM integrating a multi-mode fuze and high explosive insensitive munition warhead making it an all weather, low collateral damage, precision rocket. This added capability expands the MLRS target set to include point targets within urban and complex environments. GMLRS Unitary satisfies a validated user requirement and will be fielded to support early entry forces, Stryker brigades and Brigade Combat Teams in the Modular Force. GMLRS Unitary development efforts will also provide an insensitive munition (IM) rocket motor that will be cut into all GMLRS production once it is qualified. Continued assessments of future technologies and munitions will be performed to better satisfy validated user requirements. Additionally, appropriate spiral development and technology insertions into the GMLRS program will provide operational flexibility and capability against an expanded target set including moving targets. The system includes training devices for tactical training, classroom training and handling exercises. GMLRS is also a key component of the Marine Corps Future Fighting Effort.

### Justification:

FY06/FY07 procures 1026 and 1542 GMLRS (DPICM and/or Unitary) rockets respectively. The approved Army Acquisition Objective is 140,004 Rockets.

NOTE: For years FY07 through FY09, funding has been reduced to fund the HOWITZER Light Weight 155MM program. The HOWITZER Light Weight 155MM program is budgeted in the P, WTCV appropriation. This funding decrease is reflected in FY07 (-\$25M), FY08 (-\$58M), and FY09 (-\$3.5M). This decrease is not reflected in the printed FYDP and Procurement Annex.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>Guided MLRS Rocket (GMLRS) (C64400) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|--|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>   |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost  | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$       | \$000  | Units | \$       | \$000               | Units | \$       | \$000                  | Units | \$       |
| <b>Missile Hardware Recurring</b>                 |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| GMLRS Rockets (DPICM/Unitary) (C65404)            |          | 83155  | 786   | 106      | 90213  | 954   | 95       | 91586               | 1026  | 89       | 145262                 | 1542  | 94       |
| Engineering Services                              |          | 3925   |       |          | 3698   |       |          | 4023                |       |          | 7397                   |       |          |
| Ind Maint/Init Prod Fac                           |          | 4755   |       |          |  |       |          | 7397                |       |          | 9011                   |       |          |
| Interim Contractor Support                        |          |  |       |          | 2295   |       |          | 2337                |       |          | 2386                   |       |          |
| Fielding  |          | 42   |       |          | 117  |       |          | 246                 |       |          | 229                    |       |          |
| <b>Subtotal Hardware</b>                          |          | <b>91877</b>   |       |          | <b>96323</b>   |       |          | <b>105589</b>       |       |          | <b>164285</b>          |       |          |
| <b>Procurement Support</b>                        |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| Project Management Admin                          |          | 4147   |       |          | 5126   |       |          | 5559                |       |          | 5667                   |       |          |
| Production Engineering Support                    |          | 8291   |       |          | 7176   |       |          | 8564                |       |          | 10848                  |       |          |
| Government Test                                   |          | 2085   |       |          | 1583   |       |          | 3851                |       |          | 4008                   |       |          |
| <b>Subtotal Procurement Support</b>               |          | <b>14523</b>   |       |          | <b>13885</b>   |       |          | <b>17974</b>        |       |          | <b>20523</b>           |       |          |
| <b>Total Missile Flyaway</b>                      |          | <b>106400</b>  |       |          | <b>110208</b>  |       |          | <b>123563</b>       |       |          | <b>184808</b>          |       |          |
| <b>Support Costs</b>                              |          |  |       |          |  |       |          |                     |       |          |                        |       |          |
| GMLRS Training Devices (C65406)                   |          |  |       |          | 278  |       |          | 1177                |       |          | 308                    |       |          |
| Msl Test Device and Trainer                       |          | 367  |       |          |  |       |          | 74                  |       |          |                        |       |          |
| <b>Subtotal Support Costs</b>                     |          | <b>367</b>   |       |          | <b>278</b>   |       |          | <b>1251</b>         |       |          | <b>308</b>             |       |          |
| Spares  |          |  |       |          | 1382   |       |          |                     |       |          |                        |       |          |
| <b>Total</b>                                      |          | <b>106767</b>  |       |          | <b>111868</b>  |       |          | <b>124814</b>       |       |          | <b>185116</b>          |       |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 2 / Other missiles

Weapon System Type:

P-1 Line Item Nomenclature:  
Guided MLRS Rocket (GMLRS) (C64400)

| WBS Cost Elements:                            | Contractor and Location       | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|---|-------------------------------|--------------------------|-----------------|------------|------------------------|-----------|--------------|------------------|------------------|----------------|
| <b>GMLRS Rockets (DPICM/Unitary) (C65404)</b> |                               |                          |                 |            |                        |           |              |                  |                  |                |
| FY 2004                                       | Lockheed Martin<br>Dallas, TX | SS/FFP*                  | AMCOM,RSA,AL**  | Feb-04     | May-05                 | 786       | 106          | Yes              |                  | Nov-03         |
| FY 2005                                       | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL  | Jan-05     | Dec-05                 | 954       | 95           | Yes              |                  | Aug-04         |
| FY 2006                                       | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL  | Jan-06     | Dec-06                 | 1026      | 89           | Yes              |                  | Aug-05         |
| FY 2007                                       | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL  | Jan-07     | Dec-07                 | 1542      | 94           | Yes              |                  |                |

REMARKS: Lockheed Martin is currently the industry source that is both facilitized and qualified to produce the GMLRS rocket.

\* Sole Source/Firm Fixed Price

\*\* Aviation and Missile Command, Redstone Arsenal , AL









**FY 08 / 09 BUDGET PRODUCTION SCHEDULE**

P-1 Item Nomenclature:  
Guided MLRS Rocket (GMLRS) (C64400)

Date:  
February 2005

| COST ELEMENTS                          | MFR | FY    | SERV | PROC QTY Units | ACCEP PRIOR TO 1 OCT | BAL DUE AS OF 1 OCT | Fiscal Year 08   |     |     |     |     |     |     |     |     |     |     |     | Fiscal Year 09   |     |     |     |     |     |     |     |     |     |      |      | L A T E R |
|--|-----|-------|------|----------------|----------------------|---------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----------|
|  |     |       |      |                |                      |                     | Calendar Year 08 |     |     |     |     |     |     |     |     |     |     |     | Calendar Year 09 |     |     |     |     |     |     |     |     |     |      |      |           |
|  |     |       |      |                |                      |                     | OCT              | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT              | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG  | SEP  |           |
| GMLRS Rockets (DPICM/Unitary) (C65404) |     |       |      |                |                      |                     |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     |      |      |           |
|  | 1   | FY 03 | A    | 822            | 822                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |      |      |           |
|  | 1   | FY 04 | A    | 786            | 786                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |      |      |           |
|  | 1   | FY 05 | A    | 954            | 954                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |      |      |           |
|  | 1   | FY 06 | A    | 1026           | 588                  | 438                 | 84               | 84  | 84  | 84  | 102 |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |      |      |           |
|  | 1   | FY 07 | A    | 1542           | 0                    | 1542                |                  |     |     |     |     | 129 | 129 | 129 | 129 | 129 | 129 | 129 | 129              | 129 | 129 | 126 | 126 |     |     |     |     | 0   |      |      |           |
|  | 1   | FY 08 | A    | 2916           | 0                    | 2916                |                  |     |     | A   |     |     |     |     |     |     |     |     |                  |     |     |     |     | 244 | 244 | 244 | 244 | 244 | 242  | 1210 |           |
|  | 1   | FY 09 | A    | 4680           | 0                    | 4680                |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     | A   |     |     |     |     |     |     |     | 4680 |      |           |
|  | 1   | FY 10 | A    | 5988           | 0                    | 5988                |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 5988 |      |           |
|  | 1   | FY 11 | A    | 7740           | 0                    | 7740                |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 7740 |      |           |
|  | 1   | FY 04 | MC   | 48             | 48                   | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 0    |      |           |
|  | 1   | FY 05 | MC   | 60             | 60                   | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 0    |      |           |
|  | 1   | FY 06 | MC   | 648            | 378                  | 270                 | 54               | 54  | 54  | 54  | 54  |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 0    |      |           |
|  | 1   | FY 07 | MC   | 978            | 0                    | 978                 |                  |     |     |     |     | 78  | 78  | 78  | 78  | 78  | 78  | 78  | 78               | 78  | 78  | 78  | 120 |     |     |     |     |     | 0    |      |           |
|  | 1   | FY 08 | MC   | 726            | 0                    | 726                 |                  |     |     | A   |     |     |     |     |     |     |     |     |                  |     |     |     |     | 60  | 60  | 60  | 60  | 60  | 60   | 306  |           |
|  | 1   | FY 09 | MC   | 576            | 0                    | 576                 |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     | A   |     |     |     |     |     |     |     | 576  |      |           |
|  | 1   | FY 10 | MC   | 492            | 0                    | 492                 |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 492  |      |           |
|  | 1   | FY 11 | MC   | 372            | 0                    | 372                 |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     | 372  |      |           |
| United Kingdom                         |     |       |      |                |                      |                     |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     |      |      |           |

| MFR | NAME/LOCATION                | PRODUCTION RATES |        |        | REACHED D+ | MFR Number | ADMINLEAD TIME |             | MFR After 1 Oct | TOTAL After 1 Oct | REMARKS |   |
|-----|------------------------------|------------------|--------|--------|------------|------------|----------------|-------------|-----------------|-------------------|---------|---|
|     |                              | MIN.             | 1-8-5  | MAX.   |            |            | Prior 1 Oct    | After 1 Oct |                 |                   |         |   |
| 1   | Lockheed Martin , Dallas, TX | 42.00            | 250.00 | 500.00 | 12         | 1          | INITIAL        | 8           | 2               | 14                | 16      | Facilitization of the Contractor production line, to increase capacity to meet all future Rocket quantity requirements, begins in FY06. |
|     |                              |                  |        |        |            |            | REORDER        | 0           | 2               | 14                | 16      |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |         |   |



**FY 10 / 11 BUDGET PRODUCTION SCHEDULE**

P-1 Item Nomenclature:  
Guided MLRS Rocket (GMLRS) (C64400)

Date:  
February 2005

| COST ELEMENTS                          | MFR | FY    | SERV | PROC QTY Units | ACCEP PRIOR TO 1 OCT | BAL DUE AS OF 1 OCT | Fiscal Year 10   |     |     |     |     |     |     |     |     |     |     |     | Fiscal Year 11   |     |     |     |     |     |     |     |     |      |     |     | L A T E R |
|--|-----|-------|------|----------------|----------------------|---------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----------|
|  |     |       |      |                |                      |                     | Calendar Year 10 |     |     |     |     |     |     |     |     |     |     |     | Calendar Year 11 |     |     |     |     |     |     |     |     |      |     |     |           |
|  |     |       |      |                |                      |                     | OCT              | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT              | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL  | AUG | SEP |           |
| GMLRS Rockets (DPICM/Unitary) (C65404) |     |       |      |                |                      |                     |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |      |     |     |           |
|  | 1   | FY 03 | A    | 822            | 822                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 04 | A    | 786            | 786                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 05 | A    | 954            | 954                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 06 | A    | 1026           | 1026                 | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 07 | A    | 1542           | 1542                 | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 08 | A    | 2916           | 1706                 | 1210                | 242              | 242 | 242 | 242 | 242 |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 09 | A    | 4680           | 0                    | 4680                |                  |     |     |     |     | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390              | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 0    |     |     |           |
|  | 1   | FY 10 | A    | 5988           | 0                    | 5988                |                  |     |     | A   |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     | 499 | 499 | 2495 |     |     |           |
|  | 1   | FY 11 | A    | 7740           | 0                    | 7740                |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     | A   |     |     | 7740 |     |     |           |
|  | 1   | FY 04 | MC   | 48             | 48                   | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 05 | MC   | 60             | 60                   | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 06 | MC   | 648            | 648                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 07 | MC   | 978            | 978                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 08 | MC   | 726            | 420                  | 306                 | 60               | 60  | 60  | 66  | 60  |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0    |     |     |           |
|  | 1   | FY 09 | MC   | 576            | 0                    | 576                 |                  |     |     |     |     | 48  | 48  | 48  | 48  | 48  | 48  | 54  | 54               | 54  | 54  | 54  | 54  | 54  | 18  |     | 0   |      |     |     |           |
|  | 1   | FY 10 | MC   | 492            | 0                    | 492                 |                  |     |     | A   |     |     |     |     |     |     |     |     |                  |     |     |     |     |     | 36  | 36  | 36  | 240  |     |     |           |
|  | 1   | FY 11 | MC   | 372            | 0                    | 372                 |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     | A   |     |     | 372  |     |     |           |
| United Kingdom                         |     |       |      |                |                      |                     |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |      |     |     |           |

OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP

| MFR | NAME/LOCATION                | PRODUCTION RATES |        |        | REACHED D+ | MFR Number | ADMINLEAD TIME |             | MFR After 1 Oct | TOTAL After 1 Oct | REMARKS   |
|-----|------------------------------|------------------|--------|--------|------------|------------|----------------|-------------|-----------------|-------------------|---|
|     |                              | MIN.             | 1-8-5  | MAX.   |            |            | Prior 1 Oct    | After 1 Oct |                 |                   |   |
| 1   | Lockheed Martin , Dallas, TX | 42.00            | 250.00 | 500.00 | 12         | 1          | INITIAL        | 8           | 2               | 14                | Facilitization of the Contractor production line, to increase capacity to meet all future Rocket quantity requirements, begins in FY06. |
|     |                              |                  |        |        |            |            | REORDER        | 0           | 2               | 14                |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |   |



**FY 12 / 13 BUDGET PRODUCTION SCHEDULE**

P-1 Item Nomenclature:  
Guided MLRS Rocket (GMLRS) (C64400)

Date:  
February 2005

| COST ELEMENTS                          | MFR | FY    | SERV | PROC QTY Units | ACCEP PRIOR TO 1 OCT | BAL DUE AS OF 1 OCT | Fiscal Year 12   |     |     |     |     |     |     |     |     |     |     |     | Fiscal Year 13   |     |     |     |     |     |     |     |     |     |     |     | L A T E R |
|--|-----|-------|------|----------------|----------------------|---------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
|  |     |       |      |                |                      |                     | Calendar Year 12 |     |     |     |     |     |     |     |     |     |     |     | Calendar Year 13 |     |     |     |     |     |     |     |     |     |     |     |           |
|  |     |       |      |                |                      |                     | OCT              | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT              | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |           |
| GMLRS Rockets (DPICM/Unitary) (C65404) |     |       |      |                |                      |                     |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     |     |     |           |
|  | 1   | FY 03 | A    | 822            | 822                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 04 | A    | 786            | 786                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 05 | A    | 954            | 954                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 06 | A    | 1026           | 1026                 | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 07 | A    | 1542           | 1542                 | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 08 | A    | 2916           | 2916                 | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 09 | A    | 4680           | 4680                 | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 10 | A    | 5988           | 3493                 | 2495                | 499              | 499 | 499 | 499 | 499 |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 11 | A    | 7740           | 0                    | 7740                |                  |     |     |     | 645 | 645 | 645 | 645 | 645 | 645 | 645 | 645 | 645              | 645 | 645 | 645 | 645 | 645 | 645 | 645 | 645 | 0   |     |     |           |
|  | 1   | FY 04 | MC   | 48             | 48                   | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 05 | MC   | 60             | 60                   | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 06 | MC   | 648            | 648                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 07 | MC   | 978            | 978                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 08 | MC   | 726            | 726                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 09 | MC   | 576            | 576                  | 0                   |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 10 | MC   | 492            | 252                  | 240                 | 36               | 36  | 36  | 48  | 84  |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
|  | 1   | FY 11 | MC   | 372            | 0                    | 372                 |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     | 0   |     |     |           |
| United Kingdom                         |     |       |      |                |                      |                     |                  |     |     |     |     |     |     |     |     |     |     |     |                  |     |     |     |     |     |     |     |     |     |     |     |           |

| OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| MFR | NAME/LOCATION                | PRODUCTION RATES |        |        | REACHED D+ | MFR Number | ADMINLEAD TIME |             | MFR After 1 Oct | TOTAL After 1 Oct | REMARKS |   |
|-----|------------------------------|------------------|--------|--------|------------|------------|----------------|-------------|-----------------|-------------------|---------|---|
|     |                              | MIN.             | 1-8-5  | MAX.   |            |            | Prior 1 Oct    | After 1 Oct |                 |                   |         |   |
| 1   | Lockheed Martin , Dallas, TX | 42.00            | 250.00 | 500.00 | 12         | 1          | INITIAL        | 8           | 2               | 14                | 16      | Facilitization of the Contractor production line, to increase capacity to meet all future Rocket quantity requirements, begins in FY06. |
|     |                              |                  |        |        |            |            | REORDER        | 0           | 2               | 14                | 16      |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | INITIAL        |             |                 |                   |         |   |
|     |                              |                  |        |        |            |            | REORDER        |             |                 |                   |         |   |



# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
MLRS REDUCED RANGE PRACTICE ROCKETS (RRPR) (C65405)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

C65400, C65402, C65404

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             | 3366    | 1176    | 822     | 900     | 3336    | 4554    | 4560    | 2706    | 2622    | 21498       | 45540      |
| Gross Cost       |             | 15.6    | 8.1     | 6.6     | 7.7     | 20.6    | 29.3    | 30.0    | 19.9    | 20.3    | 205.3       | 363.5      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             | 15.6    | 8.1     | 6.6     | 7.7     | 20.6    | 29.3    | 30.0    | 19.9    | 20.3    | 205.3       | 363.5      |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             | 15.6    | 8.1     | 6.6     | 7.7     | 20.6    | 29.3    | 30.0    | 19.9    | 20.3    | 205.3       | 363.5      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0         |            |

**Description:**

The Multiple Launch Rocket System (MLRS) Reduced Range Practice Rocket (RRPR) is a training rocket. The rocket has an inert payload section with a blunt nose for inducing reduced range for use at multiple facilities both in the United States of America and other foreign countries. The RRPR has been in inventory since 1993. The FY03 procurement began the first new buys of the RRPR since 1995. The current stockpile of MLRS RRPRs for training use by the MLRS units is being reduced due to training consumption and requires replenishment to preclude stockpile depletion and to sustain adequate stockpile margins.

**Justification:**

FY06/07 funding procures 900 and 3336 RRPRs respectively, which are required to maintain the practice rocket inventory for Standards in Training Commission (STRC) requirements. Current annual requirement is approximately 4800 RRPRs.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |  | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |              |      | P-1 Line Item Nomenclature:<br>MLRS REDUCED RANGE PRACTICE ROCKETS<br>(RRPR) (C65405) |              |      | Weapon System Type: |              |      | Date:<br>February 2005 |              |      |          |
|---|--|--|--------------|------|---|--------------|------|---------------------|--------------|------|------------------------|--------------|------|----------|
| <b>MSLS<br/>Cost Elements</b>                     |  | ID<br>CD   | <b>FY 04</b> |      |   | <b>FY 05</b> |      |                     | <b>FY 06</b> |      |                        | <b>FY 07</b> |      |          |
|   |  |  | TotalCost    | Qty  | UnitCost  | TotalCost    | Qty  | UnitCost            | TotalCost    | Qty  | UnitCost               | TotalCost    | Qty  | UnitCost |
|   |  |  | \$000        | Each | \$000   | \$000        | Each | \$000               | \$000        | Each | \$000                  | \$000        | Each | \$000    |
| <b>HARDWARE</b>                                   |  |  |              |      |   |              |      |                     |              |      |                        |              |      |          |
| Reduced Range Practice Rocket (RRPR)              |  |  | 3898         | 1176 | 3   | 3611         | 822  | 4                   | 3932         | 900  | 4                      | 14459        | 3336 | 4        |
| Warheads Govt Furnished Equip (GFE)               |  |  | 635          |      |   | 482          |      |                     | 554          |      |                        | 2163         |      |          |
| Engineering Services                              |  |  | 521          |      |   | 509          |      |                     | 523          |      |                        | 533          |      |          |
| <b>SUBTOTAL</b>                                   |  |  | <b>5054</b>  |      |   | <b>4602</b>  |      |                     | <b>5009</b>  |      |                        | <b>17155</b> |      |          |
| <b>PROCUREMENT SUPPORT</b>                        |  |  |              |      |   |              |      |                     |              |      |                        |              |      |          |
| Project Management Admin                          |  |  | 927          |      |   | 862          |      |                     | 923          |      |                        | 942          |      |          |
| Production Engineering Support                    |  |  | 1661         |      |   | 798          |      |                     | 1419         |      |                        | 2143         |      |          |
| Test and Evaluation                               |  |  | 447          |      |   | 339          |      |                     | 375          |      |                        | 383          |      |          |
| <b>SUBTOTAL</b>                                   |  |  | <b>3035</b>  |      |   | <b>1999</b>  |      |                     | <b>2717</b>  |      |                        | <b>3468</b>  |      |          |
| <b>Total</b>                                      |  |  | <b>3035</b>  |      |   | <b>1999</b>  |      |                     | <b>2717</b>  |      |                        | <b>3468</b>  |      |          |
| <b>Total</b>                                      |  |  | <b>8089</b>  |      |   | <b>6601</b>  |      |                     | <b>7726</b>  |      |                        | <b>20623</b> |      |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 2 / Other missiles

Weapon System Type:

P-1 Line Item Nomenclature:  
MLRS REDUCED RANGE PRACTICE ROCKETS (RRPR) (C65405)

| WBS Cost Elements:                          | Contractor and Location       | Contract Method and Type | Location of PCO  | Award Date | Date of First Delivery | QTY Each | Unit Cost \$000 | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|---|-------------------------------|--------------------------|------------------|------------|------------------------|----------|-----------------|------------------|------------------|----------------|
| <b>Reduced Range Practice Rocket (RRPR)</b> |                               |                          |                  |            |                        |          |                 |                  |                  |                |
| FY 2004                                     | Lockheed Martin<br>Dallas, TX | SS/FFP*                  | AMCOM, RSA, AL** | Mar-04     | Feb-05                 | 1176     | 3               | Yes              |                  | Mar-04         |
| FY 2005                                     | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL   | Mar-05     | Apr-06                 | 822      | 4               | Yes              |                  | Sep-04         |
| FY 2006                                     | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL   | Mar-06     | Feb-07                 | 900      | 4               | Yes              |                  | Sep-05         |
| FY 2007                                     | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL   | Mar-07     | Feb-08                 | 3336     | 4               | Yes              |                  | Sep-06         |

REMARKS: Lockheed Martin is currently the industry source that is both facilitized and qualified to produce the Reduced Range Practice Rocket.

\* Sole Source/Firm Fixed Price

\*\* Aviation and Missile Command, Redstone Arsenal, AL







# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
MLRS LAUNCHER SYSTEMS (C66400)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

C65900

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 945         | 34      |         |         |         |         |         |         |         |         |             | 979        |
| Gross Cost       | 2807.0      | 134.3   | 37.6    | 21.1    | 20.8    |         |         |         |         |         |             | 3020.9     |
| Less PY Adv Proc | 56.9        |         |         |         |         |         |         |         |         |         |             | 56.9       |
| Plus CY Adv Proc | 56.9        |         |         |         |         |         |         |         |         |         |             | 56.9       |
| Net Proc (P-1)   | 2807.0      | 134.3   | 37.6    | 21.1    | 20.8    |         |         |         |         |         |             | 3020.9     |
| Initial Spares   | 181.2       | 6.6     | 6.5     | 6.4     |         |         |         |         |         |         |             | 200.6      |
| Total Proc Cost  | 2988.2      | 141.0   | 44.1    | 27.5    | 20.8    |         |         |         |         |         |             | 3221.5     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 4.0     |         |         |         |         |         |         |         |         |             |            |

## Description:

The M270A1 upgraded Multiple Launch Rocket System (MLRS) launcher provided critical Army Tactical Missile System (ATACMS) missile precision strike operational shaping fires and MLRS rocket counterfire and close support destructive and suppressive fires during Operation Iraq Freedom (OIF). The M270A1 upgraded MLRS launcher consists of a M993A1 carrier, a derivative of the Bradley Fighting Vehicle (BFV) carrier, and the M269A1 Launcher Loader Module (LLM). The M270A1 requires a crew of three soldiers to conduct rocket and missile launches. The system is capable of firing the MLRS Family of Munitions (MFOM) to include the Guided Multiple Launcher Rocket System (GMLRS) and the ATACMS Family of Munitions (AFOM), including precision munitions, from ranges extending from 8 to 300 kilometers. The M270A1 is capable of firing either 12 MFOM rockets or 2 AFOM missiles from a single launcher. The MLRS is designed to engage the full spectrum of threat targets in all weather environments. The MLRS is especially effective in the following roles: counterfire, suppression of enemy air defenses, light materiel, personnel targets, and point targets with minimal collateral damage. Operationally, the system is designed for mobility, flexibility, and range requirements necessary on the modern battlefield. The M270A1 improves survivability over the basic M270 by decreasing the time to aimpoint by 83%, decreasing the maintenance requirement by improving the system reliability, and decreasing operation and support costs by 31%. The M270A1 is one of the Army's recapitalization systems in which the launcher is completely remanufactured. The remanufactured LLM then adds the Improved Fire Control System (IFCS) and the Improved Launcher Mechanical System (ILMS) to complete the M270A1 upgrade. Procurement of the IFCS and ILMS upgrades began in FY98. The M270A1 upgrades are needed to fire the Army Tactical Missile System (ATACMS) Block IA missile, Block II missile, ATACMS Quick Reaction Unitary (QRU) missile and Guided MLRS (GMLRS) rockets. The IFCS is a modification to the current Fire Control System that upgrades the system's electronics, providing increased processing capability, an embedded global positioning system for accurate position location for the launcher and munitions, and improved fault isolation for ease of launcher maintenance. The ILMS allows for faster target engagement on time-sensitive, short-dwell-time targets, greatly improves the survivability of the crew and the launcher by significantly reducing the time on the firing point and the time for reload operations. The versatility of the system permits adaptation to other warheads such as scatterable mines, unitary warheads, terminally guided munitions, and other smart munitions that will expand the system's target set. Launchers procured in FY98-FY03 were M270A1 upgrades.

## Justification:

The FY06 funding provides for fielding of M270A1 launchers and product support. The Army Acquisition Objective (AAO) for the M270A1 launcher is 225, total program quantity includes M270 launchers.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles |             |         |         |         | P-1 Item Nomenclature<br>MLRS LAUNCHER (C65900) |         |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---|---------|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:<br>C66400       |         |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  | 945         | 34      |         |         |   |         |         |         |         |         |             | 979        |
| Gross Cost  | 2807.0      | 134.3   | 37.6    | 21.1    | 20.8  |         |         |         |         |         |             | 3020.9     |
| Less PY Adv Proc  | 56.9        |         |         |         |   |         |         |         |         |         |             | 56.9       |
| Plus CY Adv Proc  | 56.9        |         |         |         |   |         |         |         |         |         |             | 56.9       |
| Net Proc (P-1)  | 2807.0      | 134.3   | 37.6    | 21.1    | 20.8  |         |         |         |         |         |             | 3020.9     |
| Initial Spares  | 181.2       | 6.6     | 6.5     | 6.4     |   |         |         |         |         |         |             | 200.6      |
| Total Proc Cost   | 2988.2      | 141.0   | 44.1    | 27.5    | 20.8  |         |         |         |         |         |             | 3221.5     |
| Flyaway U/C   |             |         |         |         |   |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             | 4.0     |         |         |   |         |         |         |         |         |             |            |

**Description:**

The M270A1 upgraded Multiple Launch Rocket System (MLRS) launcher provided critical Army Tactical Missile System (ATACMS) missile precision strike operational shaping fires and MLRS rocket counterfire and close support destructive and suppressive fires during Operation Iraq Freedom (OIF). The M270A1 upgraded MLRS launcher consists of a M993A1 carrier, a derivative of the Bradley Fighting Vehicle (BFV) carrier, and the M269A1 Launcher Loader Module (LLM). The M270A1 requires a crew of three soldiers to conduct rocket and missile launches. The system is capable of firing the MLRS Family of Munitions (MFOM) to include the Guided Multiple Launcher Rocket System (GMLRS) and the ATACMS Family of Munitions (AFOM), including precision munitions, from ranges extending from 8 to 300 kilometers. The M270A1 is capable of firing either 12 MFOM rockets or 2 AFOM missiles from a single launcher. The MLRS is designed to engage the full spectrum of threat targets in all weather environments. The MLRS is especially effective in the following roles: counterfire, suppression of enemy air defenses, light materiel, personnel targets, and point targets with minimal collateral damage. Operationally, the system is designed for mobility, flexibility, and range requirements necessary on the modern battlefield. The M270A1 improves survivability over the basic M270 by decreasing the time to aimpoint by 83%, decreasing the maintenance requirement by improving the system reliability, and decreasing operation and support costs by 31%. The M270A1 is one of the Army's recapitalization systems in which the launcher is completely remanufactured. The remanufactured LLM then adds the Improved Fire Control System (IFCS) and the Improved Launcher Mechanical System (ILMS) to complete the M270A1 upgrade. Procurement of the IFCS and ILMS upgrades began in FY98. The M270A1 upgrades are needed to fire the ATACMS Block IA missile, Block II missile, ATACMS Quick Reaction Unitary (QRU) missile and Guided MLRS (GMLRS) rockets. The IFCS is a modification to the current Fire Control System that upgrades the system's electronics, providing increased processing capability, an embedded global positioning system for accurate position location for the launcher and munitions, and improved fault isolation for ease of launcher maintenance. The ILMS allows for faster target engagement on time-sensitive, short-dwell-time targets, greatly improves the survivability of the crew and the launcher by significantly reducing the time on the firing point and the time for reload operations. The versatility of the system permits adaptation to other warheads such as scatterable mines, unitary warheads, terminally guided munitions, and other smart munitions that will expand the system's target set. Launchers procured in FY98-FY03 were M270A1 upgrades.

**Justification:**

The FY06 funding provides for fielding of M270A1 launchers and product support. The Army Acquisition Objective (AAO) for the M270A1 launcher is 225, total program quantity includes M270 launchers.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |      |          | P-1 Line Item Nomenclature:<br>MLRS LAUNCHER (C65900) |      |          | Weapon System Type: |      |          | Date:<br>February 2005 |      |          |
|---|----------|--|------|----------|---|------|----------|---------------------|------|----------|------------------------|------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |      |          | <b>FY 05</b>  |      |          | <b>FY 06</b>        |      |          | <b>FY 07</b>           |      |          |
|   |          | TotalCost  | Qty  | UnitCost | TotalCost   | Qty  | UnitCost | TotalCost           | Qty  | UnitCost | TotalCost              | Qty  | UnitCost |
|   |          | \$000  | Each | \$000    | \$000   | Each | \$000    | \$000               | Each | \$000    | \$000                  | Each | \$000    |
| <b>GROUND EQUIPMENT HARDWARE</b>                  |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| Launcher  |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| Remanufacture                                     |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| Launcher Pod/Container (LP/C) Trainer             |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| System Safety Reduction Evaluation                |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| 2x9/3x6 Launcher                                  |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| Peculiar Support Equipment                        |          | 2755   |      |          | 3223  |      |          | 2107                |      |          |                        |      |          |
| Engineering Services                              |          | 9912   |      |          | 2339  |      |          | 3736                |      |          |                        |      |          |
| Production Engineering                            |          | 3346   |      |          | 2307  |      |          | 2204                |      |          |                        |      |          |
| Other Government Agencies                         |          | 8008   |      |          | 2883  |      |          | 2977                |      |          |                        |      |          |
| Engineering Change Orders                         |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| Fielding  |          | 7109   |      |          | 6249  |      |          | 5909                |      |          |                        |      |          |
| Facilitization                                    |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| <b>SUBTOTAL</b>                                   |          | <b>31130</b>   |      |          | <b>17001</b>  |      |          | <b>16933</b>        |      |          |                        |      |          |
| <b>PROCUREMENT SUPPORT</b>                        |          |  |      |          |   |      |          |                     |      |          |                        |      |          |
| Project Management Admin                          |          | 6489   |      |          | 4117  |      |          | 3854                |      |          |                        |      |          |
| <b>SUBTOTAL</b>                                   |          | <b>6489</b>  |      |          | <b>4117</b>   |      |          | <b>3854</b>         |      |          |                        |      |          |
| <b>Net P-1 Full Funding Cost</b>                  |          | <b>37619</b>   |      |          | <b>21118</b>  |      |          | <b>20787</b>        |      |          |                        |      |          |
| Initial Spares                                    |          | 6473   |      |          | 6350  |      |          |                     |      |          |                        |      |          |
| <b>TOTAL</b>                                      |          | <b>6473</b>  |      |          | <b>6350</b>   |      |          |                     |      |          |                        |      |          |
| <b>Total</b>                                      |          | <b>44092</b>   |      |          | <b>27468</b>  |      |          | <b>20787</b>        |      |          |                        |      |          |

# Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |                                  | Weapon System Type:      |                  |            | P-1 Line Item Nomenclature:<br>MLRS LAUNCHER (C65900) |          |                 |                  |                  |                |
|--|----------------------------------|--------------------------|------------------|------------|---|----------|-----------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location          | Contract Method and Type | Location of PCO  | Award Date | Date of First Delivery                                | QTY Each | Unit Cost \$000 | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>Launcher</b><br>FY 2003   | Lockheed Martin<br>Dallas, Texas | SS/FFP*                  | AMCOM, RSA, AL** | Dec 02     | Jul 04  | 34       | 1874            | Yes              |                  | 2003           |

REMARKS: Lockheed Martin is currently the only industry source that is both facilitized and qualified to produce the M270A1 Launcher.

\*Sole Source/Firm Fixed Price

\*\*Aviation and Missile Command, Redstone Arsenal, Alabama



# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /2/Other missiles

P-1 Item Nomenclature  
High Mobility Artillery Rocket System (HIMARS) (C02901)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

C03000 HIMARS & C03001 HIMARS Training Devices

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             | 28      | 24      | 37      | 35      | 47      | 55      | 57      | 59      | 59      | 487         | 888        |
| Gross Cost       |             | 133.6   | 121.7   | 168.6   | 174.9   | 226.9   | 235.3   | 247.4   | 258.9   | 261.4   | 2366.9      | 4195.6     |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             | 133.6   | 121.7   | 168.6   | 174.9   | 226.9   | 235.3   | 247.4   | 258.9   | 261.4   | 2366.9      | 4195.6     |
| Initial Spares   |             |         | 6.6     | 4.0     | 8.4     | 7.7     | 11.3    | 11.8    | 12.3    | 8.4     | 127.8       | 198.3      |
| Total Proc Cost  |             | 133.6   | 128.3   | 172.6   | 183.3   | 234.6   | 246.6   | 259.2   | 271.2   | 269.8   | 2494.7      | 4393.9     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 4.8     | 5.1     | 4.6     | 5.0     | 4.8     | 4.3     | 4.3     | 4.4     | 4.4     | 4.9         |            |

### Description:

The High Mobility Artillery Rocket System (HIMARS) fully supports a more deployable, affordable, and lethal Joint Expeditionary Force. The HIMARS launcher is a C-130 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) and Army Tactical Missile System (ATACMS) Family of Munitions (AFOM). The HIMARS launcher (XM142) has extensive commonality with the MLRS M270A1 tracked launcher and consists of a Fire Control System (FCS), a carrier (FMTV M1096 automotive chassis) and a launcher-loader module (LLM) that performs all operations necessary to complete a fire mission. The MFOM and AFOM are a family of rockets and missiles capable of attacking a variety of tactical and operational targets, providing the requisite range and lethality to support maneuver commanders out to 300 kilometers. HIMARS satisfies the Army's digitization requirements by interfacing with the Advanced Field Artillery Tactical Data System (AFATDS) fire support command and control system. HIMARS is interoperable with existing MLRS units in terms of communications and reloading capabilities. HIMARS is an all-weather, day/night, indirect fire system used in support of light, early and forced entry expeditionary operations using a more deployable, lethal, survivable and tactically mobile long range system. The HIMARS is deployable worldwide and will operate in a wide range of climatic conditions. It is certified by the Air Force for fixed-wing air transport in a fully combat loaded, combat ready configuration. HIMARS, as part of the Fires Brigade, will provide fires that shape, shield and isolate the battle space. The HIMARS will provide Joint Expeditionary Force a flexible and lethal rocket/missile capability that can be employed by platoon, battery, or battalion, each with the ability to operate independently for a limited period. HIMARS units can be quickly tailored for centralized or decentralized execution throughout the depth and breadth of the battle space in support of distributed forces. The system also includes training devices for tactical training, classroom training, and handling exercises.

### Justification:

FY06/07 procures 35 and 47 respectively HIMARS launchers, trainers and associated support items of equipment. HIMARS meets the Army's modernization goal for the 21st century, and was selected by Army strategic planners as one of the Army's core systems of the Fires Brigade. The approved Army Acquisition Objective is 888.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |       |          | P-1 Line Item Nomenclature:<br>High Mobility Artillery Rocket System<br>(HIMARS) (C02901) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|--|-------|----------|---|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |       |          | <b>FY 05</b>  |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost  | Qty   | UnitCost | TotalCost   | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000  | Units | \$       | \$000   | Units | \$       | \$000               | Units | \$       | \$000                  | Units | \$       |
| <b>GROUND EQUIPMENT HARDWARE</b>                  |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Launcher (SSN C02901)                             |          | 79341  | 24    | 3306     | 104771  | 37    | 2832     | 106526              | 35    | 3044     | 141860                 | 47    | 3018     |
| Carrier (Government Furnished Equipment)          |          | 8616   | 24    | 359      | 13008   | 37    | 352      | 13652               | 35    | 391      | 20279                  | 47    | 431      |
| Engineering Services, IES                         |          | 5522   |       |          | 11106   |       |          | 11689               |       |          | 14351                  |       |          |
| Fielding  |          | 2770   |       |          | 3286  |       |          | 4615                |       |          | 5036                   |       |          |
| Facilitization                                    |          |  |       |          |   |       |          | 5183                |       |          | 12631                  |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>96249</b>   |       |          | <b>132171</b>   |       |          | <b>141665</b>       |       |          | <b>194157</b>          |       |          |
| <b>PROCUREMENT SUPPORT</b>                        |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Project Management Admin                          |          | 7423   |       |          | 7693  |       |          | 8147                |       |          | 8444                   |       |          |
| Production Engineering                            |          | 8482   |       |          | 11263   |       |          | 11731               |       |          | 12299                  |       |          |
| Government Testing                                |          | 246  |       |          | 3115  |       |          | 4657                |       |          | 5011                   |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>16151</b>   |       |          | <b>22071</b>  |       |          | <b>24535</b>        |       |          | <b>25754</b>           |       |          |
| <b>SUPPORT EQUIPMENT</b>                          |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Peculiar Support Equipment                        |          | 4283   |       |          | 2351  |       |          | 3044                |       |          | 3774                   |       |          |
| <b>SUBTOTAL</b>                                   |          | <b>4283</b>  |       |          | <b>2351</b>   |       |          | <b>3044</b>         |       |          | <b>3774</b>            |       |          |
| <b>Training Devices (C03001)</b>                  |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Tactical Trainer                                  |          | 3178   |       |          | 10588   |       |          | 4225                |       |          | 1324                   |       |          |
| Simulator   |          | 486  |       |          | 972   |       |          | 934                 |       |          | 1387                   |       |          |
| Organizational Maintenance Trainer                |          | 1400   |       |          | 443   |       |          | 526                 |       |          | 491                    |       |          |
| <b>Subtotal</b>                                   |          | <b>5064</b>  |       |          | <b>12003</b>  |       |          | <b>5685</b>         |       |          | <b>3202</b>            |       |          |
| <b>Gross P-1 End Cost</b>                         |          | <b>121747</b>  |       |          | <b>168596</b>   |       |          | <b>174929</b>       |       |          | <b>226887</b>          |       |          |
| <b>Other Non P-1 Costs</b>                        |          |  |       |          |   |       |          |                     |       |          |                        |       |          |
| Initial Spares                                    |          | 6571   |       |          | 4016  |       |          | 8363                |       |          | 7742                   |       |          |
| <b>Subtotal</b>                                   |          | <b>6571</b>  |       |          | <b>4016</b>   |       |          | <b>8363</b>         |       |          | <b>7742</b>            |       |          |
| <b>Total</b>                                      |          | <b>128318</b>  |       |          | <b>172612</b>   |       |          | <b>183292</b>       |       |          | <b>234629</b>          |       |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army / 2 / Other missiles |                                 | Weapon System Type:      |                 |            | P-1 Line Item Nomenclature:<br>High Mobility Artillery Rocket System (HIMARS) (C02901) |           |              |                  |                  |                |
|--|---------------------------------|--------------------------|-----------------|------------|--|-----------|--------------|------------------|------------------|----------------|
| WBS Cost Elements:   | Contractor and Location         | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery   | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
| <b>Launcher (SSN C02901)</b>   |                                 |                          |                 |            |  |           |              |                  |                  |                |
| FY 2004  | Lockheed Martin<br>Dallas Texas | SS/FFP*                  | AMCOM, RSA, AL* | Dec 03     | Mar 05   | 24        | 3306         | Yes              |                  | Jul 03         |
| FY 2005  | Lockheed Martin<br>Dallas Texas | SS/FFP                   | AMCOM, RSA, AL  | Dec 04     | Mar 06   | 37        | 2832         | Yes              |                  | Apr 04         |
| FY 2006  | Lockheed Martin<br>Dallas Texas | SS/FFP                   | AMCOM, RSA, AL  | Dec 05     | Mar 07   | 35        | 3044         | Yes              |                  | Aug 05         |
| FY 2007  | Lockheed Martin<br>Dallas Texas | SS/FFP                   | AMCOM, RSA, AL  | Dec 06     | Mar 08   | 47        | 3069         | Yes              |                  |                |

REMARKS: Sole Source - Lockheed Martin Missiles and Fire Control System (LMMFC) is currently the only industry source that is both facilitized and qualified to produce the HIMARS Launcher.

AMCOM, RSA, AL - Aviation and Missile Command, Redstone Arsenal, AL

\*SS/FFP - Sole Source/Firm Fixed Price

Note: Unit cost shown above reflects launcher costs only and does not reflect the cost of carriers which are provided to LMMFC as GFE.











# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /2/Other missiles | P-1 Item Nomenclature<br>ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510) |
|---|--|

|                                    |       |                                 |
|------------------------------------|-------|---------------------------------|
| Program Elements for Code B Items: | Code: | Other Related Program Elements: |
|------------------------------------|-------|---------------------------------|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         | 2323        | 156     | 60      | 50      | 45      | 43      | 43      |         |         |         |             | 2720       |
| Gross Cost       | 603.8       | 141.6   | 57.6    | 61.2    | 58.5    | 60.5    | 61.0    |         |         |         |             | 1044.3     |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 603.8       | 141.6   | 57.6    | 61.2    | 58.5    | 60.5    | 61.0    |         |         |         |             | 1044.3     |
| Initial Spares   | 1.9         |         |         |         |         |         |         |         |         |         |             | 1.9        |
| Total Proc Cost  | 605.7       | 141.6   | 57.6    | 61.2    | 58.5    | 60.5    | 61.0    |         |         |         |             | 1046.2     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             | 0.9     | 1.0     | 1.2     | 1.3     | 1.4     | 1.4     |         |         |         |             |            |

**Description:**

Army Tactical Missile Systems (ATACMS) Block IA is a ground-launched missile system consisting of a surface-to-surface guided missile with an anti-personnel, anti-materiel (APAM) warhead. The ATACMS Block IA Quick Reaction Unitary (QRU) integrates global positioning system (GPS) components and increases the range of the Block I missile, providing a critical asset for the Future Force. The QRU replaces the Block IA APAM warhead with a Harpoon Warhead procured from the Navy. The inherent GPS accuracies will be achievable independent of range. ATACMS missiles are fired from the Multiple Launch Rocket System (MLRS) modified M270A1 launcher or the High Mobility Artillery Rocket System (HIMARS) and are being deployed within the ammunition loads of Corps MLRS battalions and/or Division artillery MLRS batteries.

Also contained within this P-form is Viper Strike Quick Reaction Capability (QRC). The Hunter / Viper Strike is an armed UAV capability comprised of an Army Tactical Missile System (ATACMS) Base Brilliant Anti-Armor Submunition (BAT) modified to include a Semi-Active Laser (SAL) Seeker. It is designed to be dispensed from a Hunter UAV with modified wings. After target acquisition and target designation by a dual mode sensor payload mounted on the UAV. FY03 funding provided a Quick Reaction Capability which included training, crew certification, and 25 tactical Viper Strike munitions to the Army Hunter Unmanned Aerial Vehicle Units deployed in support of Operation Iraqi Freedom. The Viper Strike program meets the requirements submitted by the Commander, Multi-National Corps - Iraq through an Operational Needs Statement to the Army.

**Justification:**

FY06/07 funding procures 45 and 43 of the ATACMS Block 1A Quick Reaction Unitary (QRU) missiles respectively.

FY 2005 funding does not include \$3.6 million for the Force Protection / Urgent Need Equipping Reprogramming done in support of Operation Iraqi Freedom. The \$3.6 million supports the modification of existing BAT submunitions into the Viper Strike configuration.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 2 / Other missiles |      |          | P-1 Line Item Nomenclature:<br>ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510) |      |          | Weapon System Type: |      |          | Date:<br>February 2005 |      |          |
|---|----------|--|------|----------|--|------|----------|---------------------|------|----------|------------------------|------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>   |      |          | <b>FY 05</b>   |      |          | <b>FY 06</b>        |      |          | <b>FY 07</b>           |      |          |
|   |          | TotalCost  | Qty  | UnitCost | TotalCost  | Qty  | UnitCost | TotalCost           | Qty  | UnitCost | TotalCost              | Qty  | UnitCost |
|   |          | \$000  | Each | \$000    | \$000  | Each | \$000    | \$000               | Each | \$000    | \$000                  | Each | \$000    |
| <b>Missile Hardware - Recurring</b>               |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Prime Contract                                    |          | 43500  | 60   | 725      | 45871  | 50   | 917      | 41805               | 45   | 929      | 40463                  | 43   | 941      |
| Warheads Govt Furnished Equip (GFE)               |          | 390  |      |          | 375  |      |          | 366                 |      |          | 2231                   |      |          |
| Engineering Services                              |          | 3589   |      |          | 1709   |      |          | 2207                |      |          | 3001                   |      |          |
| Flight Kits                                       |          | 660  |      |          | 598  |      |          | 697                 |      |          | 701                    |      |          |
| Fielding  |          | 26   |      |          | 26   |      |          | 37                  |      |          | 39                     |      |          |
| <b>SubTotal Missile Hardware</b>                  |          | <b>48165</b>   |      |          | <b>48579</b>   |      |          | <b>45112</b>        |      |          | <b>46435</b>           |      |          |
| <b>Procurement Support</b>                        |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Project Management                                |          | 2073   |      |          | 2398   |      |          | 3029                |      |          | 3078                   |      |          |
| Production Engineering Support                    |          | 4159   |      |          | 5507   |      |          | 6269                |      |          | 6439                   |      |          |
| Test and Evaluation                               |          | 2790   |      |          | 3033   |      |          | 3157                |      |          | 3529                   |      |          |
| <b>Subtotal Procurement Support</b>               |          | <b>9022</b>  |      |          | <b>10938</b>   |      |          | <b>12455</b>        |      |          | <b>13046</b>           |      |          |
| <b>Total Missile Flyaway</b>                      |          | <b>57187</b>   |      |          | <b>59517</b>   |      |          | <b>57567</b>        |      |          | <b>59481</b>           |      |          |
| <b>Command &amp; Launch Hardware</b>              |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Command & Launch Integration Support              |          | 385  |      |          | 622  |      |          | 817                 |      |          | 927                    |      |          |
| <b>Subtotal C &amp; L Integration</b>             |          | <b>385</b>   |      |          | <b>622</b>   |      |          | <b>817</b>          |      |          | <b>927</b>             |      |          |
| <b>Support Costs</b>                              |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| Missile Test Device                               |          |  |      |          | 1108   |      |          | 74                  |      |          | 76                     |      |          |
| Test and Support Equipment                        |          |  |      |          |  |      |          |                     |      |          |                        |      |          |
| <b>Subtotal Support Cost</b>                      |          |  |      |          | <b>1108</b>  |      |          | <b>74</b>           |      |          | <b>76</b>              |      |          |
| <b>Total</b>                                      |          | <b>57572</b>   |      |          | <b>61247</b>   |      |          | <b>58458</b>        |      |          | <b>60484</b>           |      |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 2 / Other missiles

Weapon System Type:

P-1 Line Item Nomenclature:  
ARMY TACTICAL MSL SYS (ATACMS) - SYS SUM (C98510)

| WBS Cost Elements:    | Contractor and Location       | Contract Method and Type | Location of PCO  | Award Date | Date of First Delivery | QTY Each | Unit Cost \$000 | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|-----------------------|-------------------------------|--------------------------|------------------|------------|------------------------|----------|-----------------|------------------|------------------|----------------|
| <b>Prime Contract</b> |                               |                          |                  |            |                        |          |                 |                  |                  |                |
| FY 2004               | Lockheed Martin<br>Dallas, TX | SS/FFP*                  | AMCOM, RSA, AL** | MAR 04     | AUG 05                 | 60       | 725             | Yes              |                  | ***N/A         |
| FY 2005               | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL   | FEB 05     | JAN 06                 | 50       | 917             | Yes              |                  | ***N/A         |
| FY 2006               | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL   | FEB 06     | JAN 07                 | 45       | 929             | Yes              |                  |                |
| FY 2007               | Lockheed Martin<br>Dallas, TX | SS/FFP                   | AMCOM, RSA, AL   | FEB 07     | JAN 08                 | 43       | 941             | Yes              |                  |                |

REMARKS: Lockheed Martin is currently the industry source that is both facilitized and qualified to produce the ATACMS Block 1A missile and all variants.

\* Sole Source/Firm Fixed Price Contract

\*\* Aviation and Missile Command, Redstone Arsenal, AL

\*\*\* Letter Contract with Options.







# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles | P-1 Item Nomenclature<br>Patriot MODS (C50700) |
|---|--|

|                                    |       |  |
|------------------------------------|-------|--|
| Program Elements for Code B Items: | Code: | Other Related Program Elements:<br>Patriot Modification Initial Spares, CA0267 |
|------------------------------------|-------|--|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 522.7       | 148.6   | 225.0   | 87.6    | 77.4    | 68.8    | 88.1    | 61.8    | 65.9    | 68.2    | 937.3       | 2351.6     |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 522.7       | 148.6   | 225.0   | 87.6    | 77.4    | 68.8    | 88.1    | 61.8    | 65.9    | 68.2    | 937.3       | 2351.6     |
| Initial Spares   | 63.8        | 41.1    | 31.8    | 14.7    | 14.7    | 15.2    | 18.4    | 18.5    | 20.4    | 7.0     | 90.4        | 335.9      |
| Total Proc Cost  | 586.5       | 189.8   | 256.8   | 102.3   | 92.1    | 84.0    | 106.5   | 80.3    | 86.3    | 75.2    | 1027.7      | 2687.5     |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

The PATRIOT Weapon System Growth Program is in response to a Report of the Defense Science Board Task Force on PATRIOT Vulnerability (1978) (SECRET) and the Air Threat to Central Europe (1978-1988) ATCE-1988 (SECRET) dated 1 Aug 78, and was part of the Mid 1980 Army System Acquisition Review Council/Defense System Acquisition Review Council (ASARC/DSARC) process approving the initiation of PATRIOT production.

FY04 funding above includes \$24.0 million from a Congressionally-approved reprogramming to fund Patriot Modifications needed to address Operation Iraqi Freedom Lessons Learned.

**Justification:**

FY06/FY07 procures the planned system Growth Program which will add hardware enhancements/improvements to the total PATRIOT Weapon System as well as recapitalization to ensure operational readiness.

# Exhibit P-40M, Budget Item Justification Sheet

Date: February 2005

|   |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles |  |  | P-1 Item Nomenclature<br>Patriot Mods (C50700) |  |  |  |  |  |  |  |  |
| Program Elements for Code B Items:  |  |  | Code:  | Other Related Program Elements:<br>Patriot Modification Initial Spares, CA0267 |  |  |  |  |  |  |  |

| OSIP NO.         | Classification | Fiscal Years |         |         |         |         |         |         |         |       | TC  | Total  |
|------------------|----------------|--------------|---------|---------|---------|---------|---------|---------|---------|-------|-----|--------|
|                  |                | 2004 & PR    | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |       |     |        |
| RLCEU            |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-92-03-1233     |                | 109.1        | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0   | 0.0 | 109.1  |
| BCP              |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-97-03-1246     |                | 48.1         | 7.3     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0   | 0.0 | 55.4   |
| RAM MODS         |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-98-03-1249     |                | 67.6         | 35.8    | 23.1    | 20.9    | 48.0    | 47.4    | 47.1    | 49.4    | 273.4 |     | 612.7  |
| Radar Phase III  |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-89-03-1231     |                | 109.3        | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0   | 0.0 | 109.3  |
| CDI Phase III    |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-92-03-1238     |                | 42.5         | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0   | 0.0 | 42.5   |
| TCS              |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-01-01-1251     |                | 25.7         | 11.4    | 9.1     | 1.7     | 5.4     | 5.4     | 5.3     | 5.3     | 0.0   |     | 69.3   |
| Recapitalization |                |              |         |         |         |         |         |         |         |       |     |        |
| 1-01-01-1252     |                | 62.9         | 33.5    | 45.3    | 46.2    | 34.7    | 9.1     | 13.5    | 13.5    | 114.0 |     | 372.7  |
| Totals           |                | 465.2        | 88.0    | 77.5    | 68.8    | 88.1    | 61.9    | 65.9    | 68.2    | 387.4 |     | 1371.0 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: RAM MODS [MOD 3] 1-98-03-1249

MODELS OF SYSTEM AFFECTED: Radar, ECS, ICC, LS, BME, BMG, CRG

DESCRIPTION/JUSTIFICATION:

These modifications provide for identification and corrections to problems in the field. Corrections included in this Materiel Change involve improvements to all GSE, such as; Radar, Engagement Control Station (ECS), Information and Coordination Central (ICC), Launching Station (LS), Battalion Maintenance Equipment/Group (BME/BMG), Communications Relay Group (CRG) and ISE/PFASC Shop Sets. The purpose of this effort is the engineering, acquisition, qualification testing, and installation of modification kits.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Major milestones not applicable.

Installation Schedule:

| Pr Yr   | FY 2005 |     |     |     | FY 2006 |     |     |     | FY 2007 |     |     |     | FY 2008 |     |     |     | FY 2009 |     |     |     |
|---------|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|
|         | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   |
| Totals  |         |     |     |     |         |     |     |     |         |     |     |     |         |     |     |     |         |     |     |     |
| Inputs  | 2195    | 235 | 235 | 214 | 213     | 213 | 137 | 137 | 137     | 137 | 125 | 125 | 124     | 124 | 286 | 285 | 285     | 285 | 282 | 281 |
| Outputs | 1959    | 236 | 235 | 235 | 214     | 213 | 213 | 137 | 137     | 137 | 137 | 125 | 125     | 124 | 124 | 286 | 285     | 285 | 285 | 282 |

  

|         | FY 2010 |     |     |     | FY 2011 |     |     |     | FY 2012 |     |     |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|---|---------|---|---|---|-------------|--------|
|         | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  | 281     | 281 | 280 | 280 | 280     | 280 | 294 | 294 | 293     | 293 |     |   |         |   |   |   | 6514        | 15638  |
| Outputs | 281     | 281 | 281 | 280 | 280     | 280 | 280 | 294 | 294     | 293 | 293 |   |         |   |   |   | 6514        | 15638  |

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: 6 Months

PRODUCTION LEADTIME: 6 Months

Contract Dates: FY 2006 Dec 05 FY 2007 Dec 06

FY 2008 Dec 07

Delivery Date: FY 2006 Jun 06 FY 2007 Jun 07

FY 2008 Jun 08

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): RAM MODS [MOD 3] 1-98-03-1249

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |             | FY 2005    |             | FY 2006    |             | FY 2007    |             | FY 2008     |             | FY 2009     |             | FY 2010     |             | FY 2011     |             | TC          |              | TOTAL        |              |
|---------------------------------|----------------------|-------------|------------|-------------|------------|-------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
|                                 | Qty                  | \$          | Qty        | \$          | Qty        | \$          | Qty        | \$          | Qty         | \$          | Qty         | \$          | Qty         | \$          | Qty         | \$          | Qty         | \$           | Qty          | \$           |
|                                 | <b>RDT&amp;E</b>     |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| <b>Procurement</b>              |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Kit Quantity                    | 2665                 | 58.1        | 853        | 31.5        | 548        | 20.3        | 498        | 18.4        | 1141        | 42.2        | 1125        | 41.7        | 1120        | 41.4        | 1174        | 43.5        | 6514        | 240.6        | 15638        | 537.7        |
| Installation Kits               |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Installation Kits, Nonrecurring |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Equipment                       |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Equipment, Nonrecurring         |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Engineering Change Orders       |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Data                            |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Training Equipment              |                      | 2.5         |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              | 2.5          |
| Support Equipment               |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Other                           |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| Interim Contractor Support      |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| <b>Installation of Hardware</b> | <b>0</b>             |             |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              |              |              |
| FY2002 & Prior Equip -- Kits    | 2665                 | 7.0         |            |             |            |             |            |             |             |             |             |             |             |             |             |             |             |              | 2665         | 7.0          |
| FY2003 Equip -- Kits            |                      |             | 853        | 4.3         |            |             |            |             |             |             |             |             |             |             |             |             |             |              | 853          | 4.3          |
| FY2004 Equip -- Kits            |                      |             |            |             | 548        | 2.8         |            |             |             |             |             |             |             |             |             |             |             |              | 548          | 2.8          |
| FY2005 Equip -- Kits            |                      |             |            |             |            |             | 498        | 2.5         |             |             |             |             |             |             |             |             |             |              | 498          | 2.5          |
| FY2006 Equip -- Kits            |                      |             |            |             |            |             |            |             | 1141        | 5.8         |             |             |             |             |             |             |             |              | 1141         | 5.8          |
| FY2007 Equip -- Kits            |                      |             |            |             |            |             |            |             |             |             | 1125        | 5.7         |             |             |             |             |             |              | 1125         | 5.7          |
| FY2008 Equip -- Kits            |                      |             |            |             |            |             |            |             |             |             |             |             | 1120        | 5.7         |             |             |             |              | 1120         | 5.7          |
| FY2009 Equip -- Kits            |                      |             |            |             |            |             |            |             |             |             |             |             |             | 1174        | 5.9         |             |             |              | 1174         | 5.9          |
| TC Equip- Kits                  |                      |             |            |             |            |             |            |             |             |             |             |             |             |             |             | 6514        | 32.8        | 6514         | 32.8         |              |
| <b>Total Installment</b>        | <b>2665</b>          | <b>7.0</b>  | <b>853</b> | <b>4.3</b>  | <b>548</b> | <b>2.8</b>  | <b>498</b> | <b>2.5</b>  | <b>1141</b> | <b>5.8</b>  | <b>1125</b> | <b>5.7</b>  | <b>1120</b> | <b>5.7</b>  | <b>1174</b> | <b>5.9</b>  | <b>6514</b> | <b>32.8</b>  | <b>15638</b> | <b>72.5</b>  |
| <b>Total Procurement Cost</b>   |                      | <b>67.6</b> |            | <b>35.8</b> |            | <b>23.1</b> |            | <b>20.9</b> |             | <b>48.0</b> |             | <b>47.4</b> |             | <b>47.1</b> |             | <b>49.4</b> |             | <b>273.4</b> |              | <b>612.7</b> |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: TCS [MOD 6] 1-01-01-1251

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

Provides for implementation and improvements of the Tactical Information Broadcast Service (TIBS) updates and Integrated Broadcast Service (IBS) HW and SW at the PATRIOT BN. This includes integration of the Joint Tactical Terminal (JTT) and integration of the IBS.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Major milestones are not applicable.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |   |   |   |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| Totals  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Inputs  | 10      | 4 | 4 |   |         | 1 | 2 |   |         | 3 | 3 |   |         |   |   |   |         |   |   |   |
| Outputs | 10      |   | 4 | 4 |         |   | 1 | 2 |         |   | 3 | 3 |         |   |   |   |         |   |   |   |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 27     |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 27     |

METHOD OF IMPLEMENTATION:

Contract Dates:

FY 2006 Mar 06

ADMINISTRATIVE LEADTIME:

3 Months

PRODUCTION LEADTIME:

12 Months

Delivery Date:

FY 2006 Mar 07

FY 2007

FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): TCS [MOD 6] 1-01-01-1251

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |             | FY 2005  |             | FY 2006  |            | FY 2007 |            | FY 2008 |            | FY 2009 |            | FY 2010 |            | FY 2011 |            | TC  |            | TOTAL     |             |
|---------------------------------|----------------------|-------------|----------|-------------|----------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|-----|------------|-----------|-------------|
|                                 | Qty                  | \$          | Qty      | \$          | Qty      | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty | \$         | Qty       | \$          |
|                                 | <b>RDT&amp;E</b>     |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| <b>Procurement</b>              |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Kit Quantity                    | 18                   | 22.3        | 3        | 9.9         | 6        | 7.9        |         |            |         |            |         |            |         |            |         |            |     |            | 27        | 40.1        |
| Installation Kits               |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Installation Kits, Nonrecurring |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Equipment                       |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Equipment, Nonrecurring         |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Engineering Change Orders       |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Data                            |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Training Equipment              |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Support Equipment               |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| Other (Software)                |                      |             |          |             |          |            | 1.7     |            | 5.4     |            | 5.4     |            | 5.3     |            | 5.3     |            |     |            |           | 23.1        |
| Interim Contractor Support      |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| <b>Installation of Hardware</b> | <b>0</b>             |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| FY2002 & Prior Equip -- Kits    | 18                   | 3.4         |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            | 18        | 3.4         |
| FY2003 Equip -- Kits            |                      |             | 3        | 1.5         |          |            |         |            |         |            |         |            |         |            |         |            |     |            | 3         | 1.5         |
| FY2004 Equip -- Kits            |                      |             |          |             | 6        | 1.2        |         |            |         |            |         |            |         |            |         |            |     |            | 6         | 1.2         |
| FY2005 Equip -- Kits            |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| FY2006 Equip -- Kits            |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| FY2007 Equip -- Kits            |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| FY2008 Equip -- Kits            |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| FY2009 Equip -- Kits            |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| TC Equip- Kits                  |                      |             |          |             |          |            |         |            |         |            |         |            |         |            |         |            |     |            |           |             |
| <b>Total Installment</b>        | <b>18</b>            | <b>3.4</b>  | <b>3</b> | <b>1.5</b>  | <b>6</b> | <b>1.2</b> |         | <b>0.0</b> |     | <b>0.0</b> | <b>27</b> | <b>6.1</b>  |
| <b>Total Procurement Cost</b>   |                      | <b>25.7</b> |          | <b>11.4</b> |          | <b>9.1</b> |         | <b>1.7</b> |         | <b>5.4</b> |         | <b>5.4</b> |         | <b>5.3</b> |         | <b>5.3</b> |     | <b>0.0</b> |           | <b>69.3</b> |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Recapitalization [MOD 7] 1-01-01-1252

MODELS OF SYSTEM AFFECTED: ECS, ICC, LS,CRG

DESCRIPTION/JUSTIFICATION:

Selected upgrade of fielded systems improving operational readiness during return to a zero time/zero mile system state. Program plan is to recap one battalion equivalent per year.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Major milestones not applicable.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |   |   |   |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| Totals  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Inputs  | 1       |   | 1 |   |         | 1 |   |   |         | 1 |   |   |         | 1 |   |   |         | 1 |   |   |
| Outputs | 1       |   |   | 1 |         |   |   | 1 |         |   |   | 1 |         |   |   | 1 |         |   |   | 1 |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         | 1 |   |   |         | 1 |   |   |         | 1 |   |   |         | 1 |   |   | 4           | 14     |
| Outputs |         |   |   | 1 |         |   |   | 1 |         |   |   | 1 |         |   |   | 1 | 4           | 14     |

|                           |                                   |        |         |        |                                |        |  |  |
|---------------------------|-----------------------------------|--------|---------|--------|--------------------------------|--------|--|--|
| METHOD OF IMPLEMENTATION: | ADMINISTRATIVE LEADTIME: 3 Months |        |         |        | PRODUCTION LEADTIME: 12 Months |        |  |  |
| Contract Dates:           | FY 2006                           | Mar 06 | FY 2007 | Mar 07 | FY 2008                        | Mar 08 |  |  |
| Delivery Date:            | FY 2006                           | Mar 07 | FY 2007 | Mar 08 | FY 2008                        | Mar 09 |  |  |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Recapitalization [MOD 7] 1-01-01-1252

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |             | FY 2005  |             | FY 2006  |             | FY 2007  |             | FY 2008  |             | FY 2009  |            | FY 2010  |             | FY 2011  |             | TC       |              | TOTAL     |              |
|---------------------------------|----------------------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|------------|----------|-------------|----------|-------------|----------|--------------|-----------|--------------|
|                                 | Qty                  | \$          | Qty      | \$          | Qty      | \$          | Qty      | \$          | Qty      | \$          | Qty      | \$         | Qty      | \$          | Qty      | \$          | Qty      | \$           | Qty       | \$           |
|                                 | <b>RDT&amp;E</b>     |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| <b>Procurement</b>              |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Kit Quantity                    | 2                    | 57.2        | 1        | 30.5        | 1        | 41.2        | 1        | 42.0        | 1        | 31.6        | 1        | 8.3        | 1        | 12.3        | 1        | 12.3        | 5        | 103.7        | 14        | 339.1        |
| Installation Kits               |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Installation Kits, Nonrecurring |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Equipment                       |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Equipment, Nonrecurring         |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Engineering Change Orders       |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Data                            |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Training Equipment              |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Support Equipment               |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Other                           |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| Interim Contractor Support      |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| <b>Installation of Hardware</b> | <b>0</b>             |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              |           |              |
| FY2002 & Prior Equip -- Kits    | 2                    | 5.7         |          |             |          |             |          |             |          |             |          |            |          |             |          |             |          |              | 2         | 5.7          |
| FY2003 Equip -- Kits            |                      |             | 1        | 3.0         |          |             |          |             |          |             |          |            |          |             |          |             |          |              | 1         | 3.0          |
| FY2004 Equip -- Kits            |                      |             |          |             | 1        | 4.1         |          |             |          |             |          |            |          |             |          |             |          |              | 1         | 4.1          |
| FY2005 Equip -- Kits            |                      |             |          |             |          |             | 1        | 4.2         |          |             |          |            |          |             |          |             |          |              | 1         | 4.2          |
| FY2006 Equip -- Kits            |                      |             |          |             |          |             |          |             | 1        | 3.1         |          |            |          |             |          |             |          |              | 1         | 3.1          |
| FY2007 Equip -- Kits            |                      |             |          |             |          |             |          |             |          |             | 1        | 0.8        |          |             |          |             |          |              | 1         | 0.8          |
| FY2008 Equip -- Kits            |                      |             |          |             |          |             |          |             |          |             |          |            | 1        | 1.2         |          |             |          |              | 1         | 1.2          |
| FY2009 Equip -- Kits            |                      |             |          |             |          |             |          |             |          |             |          |            |          |             | 1        | 1.2         |          |              | 1         | 1.2          |
| TC Equip- Kits                  |                      |             |          |             |          |             |          |             |          |             |          |            |          |             |          |             | 5        | 10.3         | 5         | 10.3         |
| <b>Total Installment</b>        | <b>2</b>             | <b>5.7</b>  | <b>1</b> | <b>3.0</b>  | <b>1</b> | <b>4.1</b>  | <b>1</b> | <b>4.2</b>  | <b>1</b> | <b>3.1</b>  | <b>1</b> | <b>0.8</b> | <b>1</b> | <b>1.2</b>  | <b>1</b> | <b>1.2</b>  | <b>5</b> | <b>10.3</b>  | <b>14</b> | <b>33.6</b>  |
| <b>Total Procurement Cost</b>   |                      | <b>62.9</b> |          | <b>33.5</b> |          | <b>45.3</b> |          | <b>46.2</b> |          | <b>34.7</b> |          | <b>9.1</b> |          | <b>13.5</b> |          | <b>13.5</b> |          | <b>114.0</b> |           | <b>372.7</b> |

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No: P-1 Item Nomenclature  
 Missile Procurement, Army /3/Modification of missiles STINGER MODS (C20000)

Program Elements for Code B Items: Code: Other Related Program Elements:  
C14900, C16000

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 163.5       | 1.5     | 1.0     |         |         |         |         |         |         |         |             | 165.9      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 163.5       | 1.5     | 1.0     |         |         |         |         |         |         |         |             | 165.9      |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 163.5       | 1.5     | 1.0     |         |         |         |         |         |         |         |             | 165.9      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

The Stinger Block I missile upgrade incorporates hardware and software modifications into the Stinger-Reprogrammable Micro-Processor (RMP) Missile System to increase overall missile performance in certain engagement scenarios and to resolve a key aviation deficiency, which requires aviation platforms to super-elevate. The Stinger Block I Upgrade modifications maintain compatibility with all current and planned command and launch platforms, including Air-To-Air Stinger, Avenger, and the gripstock used in shoulder-fired applications.

**Justification:**

FY04 funds will complete upgrades for Stinger firing platforms to launch Block I missiles. The Stinger Block I program corrects deficiencies in precision engagements and information dominance against head/tail-on and slow-moving targets, counter-measures, and night-time engagements and corrects a safety deficiency whereby aviation platforms must super-elevate to fire the missile.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles |             |         |         |         | P-1 Item Nomenclature<br>STINGER BLK I UPGRADES (C21300) |         |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|--|---------|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:<br>C14900, C16000        |         |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006  | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |  |         |         |         |         |         |             |            |
| Gross Cost  | 162.0       | 1.5     | 1.0     |         |  |         |         |         |         |         |             | 164.4      |
| Less PY Adv Proc  |             |         |         |         |  |         |         |         |         |         |             |            |
| Plus CY Adv Proc  |             |         |         |         |  |         |         |         |         |         |             |            |
| Net Proc (P-1)  | 162.0       | 1.5     | 1.0     |         |  |         |         |         |         |         |             | 164.4      |
| Initial Spares  |             |         |         |         |  |         |         |         |         |         |             |            |
| Total Proc Cost   | 162.0       | 1.5     | 1.0     |         |  |         |         |         |         |         |             | 164.4      |
| Flyaway U/C   |             |         |         |         |  |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |  |         |         |         |         |         |             |            |

**Description:**

Block I hardware and software modifications to the Stinger-Reprogrammable Micro-Processor (RMP) Missile System improve performance against targets which are slow-moving, employ advanced counter-measures, or operate at night. The Stinger Block I Upgrade modifications maintain compatibility with all current and planned command and launch platforms, including Air-To-Air Stinger, Avenger, and the gripstock used in shoulder-fired applications. In order to take advantage of the Block I missile's improved capability, each firing platform must be modified. For Man Portable Air Defense System (MANPADS) gripstocks, new Electronically Erasable Read Only Memory Modules must be procured and installed in existing, fielded gripstocks. For Air-to-Air Stinger, Bradley Linebacker, and Avenger, new circuit card assemblies must be procured and installed in each system's Interface Electronics Assembly.

**Justification:**

FY04 funds will complete upgrades for Stinger firing platforms to launch Block I missiles. The Stinger Block I program corrects deficiencies in precision engagements and information dominance against head/tail-on and slow-moving targets, counter-measures, and night-time engagements and corrects a safety deficiency whereby aviation platforms must super-elevate to fire the missile.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |  |
|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles | P-1 Item Nomenclature<br>JAVELIN Missile MODS (CC1000) |
|---|--|

|                                    |       |                                 |
|------------------------------------|-------|---------------------------------|
| Program Elements for Code B Items: | Code: | Other Related Program Elements: |
|------------------------------------|-------|---------------------------------|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       |             |         |         |         | 14.0    | 12.5    | 13.3    | 15.7    |         |         |             | 55.5       |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             |         |         |         | 14.0    | 12.5    | 13.3    | 15.7    |         |         |             | 55.5       |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         |         |         | 14.0    | 12.5    | 13.3    | 15.7    |         |         |             | 55.5       |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

Javelin, a fire-and-forget system, is critical to the operation of the Army's combat force because of its precision strike, man-portability, high reliability, and capability to engage multiple types of targets (tanks, armored personnel carriers, bunkers, helicopter, walls, etc). These characteristics are key elements of the Army's move to a more versatile, deployable, lethal, survivable, and sustainable force. Javelin is the medium antitank system for infantry, scouts and combat engineers. These forces must have the capability to defeat armored forces. The Javelin, a replacement for the DRAGON, can be delivered by individual paratrooper, door bundle, tracked/wheeled vehicles, rail, ship or air. This system has a high kill rate against all known armor threats at extended ranges under day/night, adverse weather and multiple counter-measure conditions. The system's soft launch permits firing from a fighting position or an enclosure. Javelin uses a modular design to allow the system to evolve to meet changing threats and requirements via both software and hardware upgrades. The system consists of a reusable Command Launch Unit (CLU) with a built-in-test (BIT), and a modular missile encased in a launch tube assembly. The system also includes training devices for tactical training, classroom training, and handling exercises. Javelin's fire-and-forget technology allows the gunner to fire and immediately take cover, to move to another fighting position, or to reload. The Javelin provides enhanced lethality over the DRAGON through the use of a tandem warhead which will defeat all known armor threats. It is effective against both stationary and moving targets. The Javelin is capable of operating over 2.5 times the range of the DRAGON with a day/night integrated sight, capable of target acquisition in adverse weather and through battlefield obscurant conditions. This system has a secondary mission of destroying bunkers and provides defensive capability against attacking/hovering helicopters. The CLU also has been used in a stand-alone mode for battlefield surveillance and target selection in recent conflicts.

Modification of Javelin missiles to the Block I configuration provides improved survivability, lethality, increased target identification range, increased surveillance times and an external interface for net centric operation enhancements.

**Justification:**

FY06/07 funding supports modification of Javelin Missiles to the Block I configuration.

**Exhibit P-40M, Budget Item Justification Sheet**

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /3/Modification of missiles

P-1 Item Nomenclature  
JAVELIN Missile MODS (CC1000)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

| Description                   |                | Fiscal Years |         |         |         |         |         |         |         |     |       |
|-------------------------------|----------------|--------------|---------|---------|---------|---------|---------|---------|---------|-----|-------|
| OSIP NO.                      | Classification | 2004 & PR    | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | TC  | Total |
| Javelin Missile MODS (CC1000) |                |              |         |         |         |         |         |         |         |     |       |
| 0-00-00-0000                  |                | 0.0          | 0.0     | 14.0    | 12.5    | 13.3    | 15.7    | 0.0     | 0.0     | 0.0 | 55.5  |
| Totals                        |                | 0.0          | 0.0     | 14.0    | 12.5    | 13.3    | 15.7    | 0.0     | 0.0     | 0.0 | 55.5  |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |
|                               |                |              |         |         |         |         |         |         |         |     |       |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Javelin Missile MODS (CC1000) [MOD 1] 0-00-00-0000

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

Funds are required to modify Javelin Missiles into a Block I configuration, which provides improved survivability, lethality, increased target identification range, increased surveillance times and an external interface for net centric operation enhancements.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

System Qualification and Block I ECP approval will occur in FY05.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |     |   | FY 2007 |     |     |     | FY 2008 |     |     |     | FY 2009 |     |     |     |
|---------|---------|---|---|---|---------|---|-----|---|---------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3   | 4 | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   | 1       | 2   | 3   | 4   |
| Totals  |         |   |   |   |         |   |     |   |         |     |     |     |         |     |     |     |         |     |     |     |
| Inputs  | 0       |   |   |   |         |   | 625 |   |         |     | 625 |     |         |     | 625 |     |         |     | 625 |     |
| Outputs |         |   |   |   |         |   |     |   | 156     | 156 | 156 | 157 | 156     | 156 | 156 | 156 | 157     | 156 | 156 | 156 |

  

|         | FY 2010 |     |     |     | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|-----|-----|-----|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2   | 3   | 4   | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |     |     |     |         |   |   |   |         |   |   |   |         |   |   |   |             | 2500   |
| Outputs | 157     | 156 | 156 | 156 | 157     |   |   |   |         |   |   |   |         |   |   |   |             | 2500   |

METHOD OF IMPLEMENTATION:

ADMINISTRATIVE LEADTIME: 11 Months

PRODUCTION LEADTIME: 14 Months

Contract Dates: FY 2006 FY 2006 FY 2007 Mar 06

FY 2008

Delivery Date: FY 2006 FY 2006 FY 2007 Apr 08

FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Javelin Missile MODS (CC1000) [MOD 1] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |      | FY 2007 |      | FY 2008 |      | FY 2009 |      | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |      |
|---------------------------------|----------------------|-----|---------|-----|---------|------|---------|------|---------|------|---------|------|---------|-----|---------|-----|-----|-----|-------|------|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$   | Qty     | \$   | Qty     | \$   | Qty     | \$   | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$   |
|                                 | <b>RDT&amp;E</b>     |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| <b>Procurement</b>              |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Missile Remanufacture           |                      |     |         |     | 625     | 14.0 | 625     | 12.5 | 625     | 13.3 | 625     | 15.7 |         |     |         |     |     |     | 2500  | 55.5 |
| Installation Kits               |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Installation Kits, Nonrecurring |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Equipment                       |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Equipment, Nonrecurring         |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Engineering Change Orders       |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Data                            |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Training Equipment              |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Support Equipment               |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Other                           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| Interim Contractor Support      |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| <b>Installation of Hardware</b> |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2004 & Prior Equip -- Kits   |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2005 -- Kits                 |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2006 Equip -- Kits           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2007 Equip -- Kits           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2008 Equip -- Kits           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2009 Equip -- Kits           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2010 Equip -- Kits           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| FY 2011 Equip -- Kits           |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| TC Equip- Kits                  |                      |     |         |     |         |      |         |      |         |      |         |      |         |     |         |     |     |     |       |      |
| <b>Total Installment</b>        |                      | 0.0 |         | 0.0 |         | 0.0  |         | 0.0  |         | 0.0  |         | 0.0  |         | 0.0 |         | 0.0 |     | 0.0 |       | 0.0  |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 0.0 |         | 14.0 |         | 12.5 |         | 13.3 |         | 15.7 |         | 0.0 |         | 0.0 |     | 0.0 |       | 55.5 |

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles |             |         |         |         | P-1 Item Nomenclature<br>ITAS/TOW MODS (C61700) |         |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---|---------|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:                 |         |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |   |         |         |         |         |         |             |            |
| Gross Cost  | 878.9       | 58.9    | 26.6    | 9.7     | 9.6   |         | 22.4    | 45.6    | 44.9    | 66.5    |             | 1163.2     |
| Less PY Adv Proc  |             |         |         |         |   |         |         |         |         |         |             |            |
| Plus CY Adv Proc  |             |         |         |         |   |         |         |         |         |         |             |            |
| Net Proc (P-1)  | 878.9       | 58.9    | 26.6    | 9.7     | 9.6   |         | 22.4    | 45.6    | 44.9    | 66.5    |             | 1163.2     |
| Initial Spares  | 34.9        |         |         |         |   |         |         |         |         |         |             | 34.9       |
| Total Proc Cost   | 913.8       | 58.9    | 26.6    | 9.7     | 9.6   |         | 22.4    | 45.6    | 44.9    | 66.5    |             | 1198.1     |
| Flyaway U/C   |             |         |         |         |   |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |   |         |         |         |         |         |             |            |

**Description:**

The Improved Target Acquisition System (ITAS) provides long-range, lethal anti-armor and precision assault fires capability for U.S. Army Light Infantry and Stryker Brigade Combat Teams (SBCT). ITAS is a replacement for the Light Infantry's TOW 2 weapon system and provides the capability to defeat armored vehicles and other targets such as bunkers and buildings at extended ranges in all battlefield conditions thus enhancing system lethality and soldier survivability. ITAS is integrated into the Stryker Anti-Tank Guided Missile (ATGM) vehicle of the SBCT anti-tank company and also provides a surrogate precision assault capability for the SBCT infantry battalions until the Mobile Gun System (MGS) becomes available. ITAS' superior surveillance capability enables the soldier to shape the battlefield by detecting targets at long range and either engaging with TOW missiles or directing the employment of other weapon systems to destroy those targets. ITAS provides the Light Infantry and Stryker BCT with responsive, agile and lethal anti-armor and precision assault fires capability across the spectrum of contemporary operational environment.

The missile modification Missile Ordnance Inhibit Circuit (MOIC) and Missile Conversion (MC) are required to meet training and safety requirements in order to maintain TOW gunner proficiency.

Additional FY05 funding in the amount of \$35 million was provided via a Congressionally approved reprogramming in support of Operation Iraqi Freedom.

**Justification:**

Funding in FY06 will procure training devices to meet Field Tactical Trainer (MILES) density requirement, Li-Ion Power Source (LPS), fielding of systems, Contractor Fielding Support, government asset layaway, engineering services and production delivery support.



**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: ITAS (IMPROVED TARGET ACQUISITION SYSTEM) [MOD 1] MC-1-89-03-3028

MODELS OF SYSTEM AFFECTED: TOW Missile System Launcher (59300)

DESCRIPTION/JUSTIFICATION:

The Improved Target Acquisition System (ITAS) provides long-range, lethal anti-armor and precision assault fires capability for U.S. Army Light Infantry and Stryker Brigade Combat Teams (SBCT). ITAS is a replacement for the Light Infantry's TOW 2 weapon system and provides the capability to defeat armored vehicles and other targets such as bunkers and buildings at extended ranges in all battlefield conditions thus enhancing system lethality and soldier survivability. ITAS is integrated into the Stryker Anti-Tank Guided Missile (ATGM) vehicle of the SBCT anti-tank company and also provides a surrogate precision assault capability for the SBCT infantry battalions until the Mobile Gun System (MGS) becomes available. ITAS' superior surveillance capability enables the soldier to shape the battlefield by detecting targets at long range and either engaging with TOW missiles or directing the employment of other weapon systems to destroy those targets. ITAS provides the Light Infantry and Stryker BCT with responsive, agile and lethal anti-armor and precision assault fires capability across the spectrum of contemporary operational environment.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

| Pr Yr   | FY 2005 |    |    |    | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |    |    |    |
|---------|---------|----|----|----|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|----|----|----|
|         | 1       | 2  | 3  | 4  | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2  | 3  | 4  |
| Totals  |         |    |    |    |         |   |   |   |         |   |   |   |         |   |   |   |         |    |    |    |
| Inputs  | 580     | 21 | 21 | 8  |         |   |   |   |         |   |   |   |         |   |   |   | 14      | 15 | 16 | 17 |
| Outputs | 540     | 48 | 28 | 14 |         |   |   |   |         |   |   |   |         |   |   |   |         |    |    |    |

  

|         | FY 2010 |    |    |    | FY 2011 |    |    |    | FY 2012 |    |    |    | FY 2013 |    |   |   | To Complete | Totals |
|---------|---------|----|----|----|---------|----|----|----|---------|----|----|----|---------|----|---|---|-------------|--------|
|         | 1       | 2  | 3  | 4  | 1       | 2  | 3  | 4  | 1       | 2  | 3  | 4  | 1       | 2  | 3 | 4 |             |        |
| Inputs  | 20      | 12 | 13 | 15 | 24      | 24 | 24 | 19 |         |    |    |    |         |    |   |   |             | 843    |
| Outputs |         |    | 14 | 15 | 16      | 17 | 20 | 12 | 13      | 15 | 24 | 24 | 24      | 19 |   |   |             | 843    |

|                           |                          |        |         |         |           |                      |        |  |  |           |
|---------------------------|--------------------------|--------|---------|---------|-----------|----------------------|--------|--|--|-----------|
| METHOD OF IMPLEMENTATION: | ADMINISTRATIVE LEADTIME: |        |         |         | 10 Months | PRODUCTION LEADTIME: |        |  |  | 18 Months |
| Contract Dates:           | FY 2006                  | Dec 05 | FY 2007 | FY 2007 |           | FY 2008              | Dec 07 |  |  |           |
| Delivery Date:            | FY 2006                  | Jun 07 | FY 2007 | FY 2007 |           | FY 2008              | Jun 09 |  |  |           |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): ITAS (IMPROVED TARGET ACQUISITION SYSTEM) [MOD 1] MC-1-89-03-3028

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |              | FY 2005   |            | FY 2006 |            | FY 2007 |            | FY 2008 |             | FY 2009 |             | FY 2010 |             | FY 2011   |             | TC         |            | TOTAL |            |              |
|---------------------------------|----------------------|--------------|-----------|------------|---------|------------|---------|------------|---------|-------------|---------|-------------|---------|-------------|-----------|-------------|------------|------------|-------|------------|--------------|
|                                 | Qty                  | \$           | Qty       | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$          | Qty     | \$          | Qty     | \$          | Qty       | \$          | Qty        | \$         | Qty   | \$         |              |
|                                 | <b>RDT&amp;E</b>     | <b>0</b>     |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| <b>Procurement</b>              | <b>0</b>             |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| Kit Quantity                    | 630                  |              |           |            |         |            |         |            |         |             | 62      |             | 60      |             | 91        |             |            |            |       | 843        |              |
| Installation Kits               | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| Installation Kits, Nonrecurring | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| Equipment                       | 0                    | 362.9        |           | 9.5        |         | 9.6        |         |            |         | 7.4         |         | 41.3        |         | 39.8        |           | 59.7        |            |            |       |            | 530.2        |
| Equipment, Nonrecurring         | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| Engineering Change Orders       | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| Data                            | 0                    | 1.3          |           |            |         |            |         |            |         |             |         | 0.1         |         | 0.1         |           | 0.1         |            |            |       |            | 1.6          |
| Training Equipment              | 0                    | 31.1         |           |            |         |            |         |            |         |             |         | 2.8         |         | 2.8         |           | 4.4         |            |            |       |            | 41.1         |
| Support Equipment               | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| Production Line Restart         | 0                    | 3.7          |           |            |         |            |         |            |         | 15.0        |         |             |         |             |           |             |            |            |       |            | 18.7         |
| CLS Initial Spares              | 0                    | 23.9         |           |            |         |            |         |            |         |             |         | 1.4         |         | 2.2         |           | 2.3         |            |            |       |            | 29.8         |
| <b>Installation of Hardware</b> | <b>0</b>             |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2002 & Prior Equip -- Kits    | 540                  | 1.1          | 90        | 0.2        |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       | 630        | 1.3          |
| FY2003 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2004 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2005 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2006 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2007 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2008 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             |            |            |       |            |              |
| FY2009 Equip -- Kits            | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             | 56        |             |            |            |       | 6          | 62           |
| TC Equip- Kits                  | 0                    |              |           |            |         |            |         |            |         |             |         |             |         |             |           |             | 151        |            |       |            | 151          |
| <b>Total Installment</b>        | <b>540</b>           | <b>1.1</b>   | <b>90</b> | <b>0.2</b> |         | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b>  |         | <b>0.0</b>  |         | <b>0.0</b>  | <b>56</b> | <b>0.0</b>  | <b>157</b> | <b>0.0</b> |       | <b>843</b> | <b>1.3</b>   |
| <b>Total Procurement Cost</b>   |                      | <b>424.0</b> |           | <b>9.7</b> |         | <b>9.6</b> |         | <b>0.0</b> |         | <b>22.4</b> |         | <b>45.6</b> |         | <b>44.9</b> |           | <b>66.5</b> |            | <b>0.0</b> |       |            | <b>622.7</b> |

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /3/Modification of missiles

P-1 Item Nomenclature  
MLRS MODS (C67500)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 266.5       | 22.2    | 19.8    | 18.9    | 14.6    | 6.8     | 5.5     | 1.9     | 3.1     | 3.1     | 27.0        | 389.3      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 266.5       | 22.2    | 19.8    | 18.9    | 14.6    | 6.8     | 5.5     | 1.9     | 3.1     | 3.1     | 27.0        | 389.3      |
| Initial Spares   | 16.3        | 0.4     | 1.3     | 5.0     | 5.2     | 0.5     | 1.0     | 1.0     | 1.0     | 1.0     | 9.0         | 41.7       |
| Total Proc Cost  | 282.8       | 22.5    | 21.0    | 23.9    | 19.8    | 7.3     | 6.5     | 2.9     | 4.1     | 4.1     | 36.0        | 431.0      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

The M270A1 upgraded Multiple Launch Rocket System (MLRS) launcher provided critical Army Tactical Missile System (ATACMS) missile precision strike operational shaping fires and MLRS rocket counterfire and close support destructive and suppressive fires during Operation Iraq Freedom (OIF). The M270A1 upgraded MLRS launcher consists of a M993A1 carrier, a derivative of the Bradley Fighting Vehicle (BFV) carrier, and the M269A1 Launcher Loader Module (LLM). The system is capable of firing the MLRS Family of Munitions (MFOM) to include the Guided Multiple Launcher Rocket System (GMLRS), and the ATACMS Family of Munitions (AFOM), including precision munitions, to a range of 300KM. The M270A1 is capable of firing either 12 MFOM rockets or 2 AFOM missiles from a single launcher.

**Justification:**

FY06/07 procures Joint Technical Architecture-Army (JTA-A) Low Cost Fire Control Panel (LCFCP), Selective Availability Anti-Spoofing Module (SAASM), Improved Weapons Interface Unit (IWIU), M270A1 Generator Improvements, Obsolescence Mitigation/Engineering Change Proposal Integration, Launcher-Loader Module (LLM) Disable Switch, Machine Gun Mounts, Global Positioning System (GPS), Cordless Vehicular Intercommunication Systems (VIS), and Auxiliary Power Unit/Environmental Control Unit (APU/ECU), Elevation Resolver, and the S-250 Shelter modifications. The following are new modifications that begin in FY06/07; Machine Gun Mounts, GPS Upgrades, and M993A1 Carrier Block I Upgrades, Cordless VIS, Elevation Resolver, and the S-250 Shelter.

# Exhibit P-40M, Budget Item Justification Sheet

Date: February 2005

|   |  |  |   |                                 |  |  |  |  |  |  |  |
|---|--|--|---|---------------------------------|--|--|--|--|--|--|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles |  |  | P-1 Item Nomenclature<br>MLRS MODS (C67500) |                                 |  |  |  |  |  |  |  |
| Program Elements for Code B Items:  |  |  | Code:                                       | Other Related Program Elements: |  |  |  |  |  |  |  |

| Description                                       |                    | Fiscal Years |         |         |         |         |         |         |         |      |       |
|---|--------------------|--------------|---------|---------|---------|---------|---------|---------|---------|------|-------|
| OSIP NO.  | Classification     | 2004 & PR    | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | TC   | Total |
| Inactive Mods                                     |                    |              |         |         |         |         |         |         |         |      |       |
| Prior Year MCs                                    | Oper/Safety/Reliab | 220.3        | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 220.3 |
| Interim Improved Position Determining System Lchr |                    |              |         |         |         |         |         |         |         |      |       |
| 1-95-03-0528                                      | Operational        | 25.0         | 0.3     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 25.3  |
| Selective Availability Anti-Spoofing Module       |                    |              |         |         |         |         |         |         |         |      |       |
| 1-96-03-0534                                      | Operational        | 0.0          | 7.5     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 7.5   |
| Joint Technical Architecture-Army (JTA-A)         |                    |              |         |         |         |         |         |         |         |      |       |
| 1-97-03-0537                                      | Operational        | 11.3         | 0.6     | 0.3     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 12.2  |
| Improved Weapons Interface Unit Modification MOD  |                    |              |         |         |         |         |         |         |         |      |       |
| 1-99-03-0546                                      | Operational        | 11.5         | 0.6     | 0.0     | 0.1     | 0.1     | 0.0     | 0.0     | 0.0     | 0.0  | 12.3  |
| M270A1 Generator Improvements                     |                    |              |         |         |         |         |         |         |         |      |       |
| 1-02-02-0553                                      | Reliability        | 0.8          | 0.1     | 0.2     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 1.1   |
| Obsolescence Mitigation/ECP Reliability Intg      |                    |              |         |         |         |         |         |         |         |      |       |
| 1-99-03-0534                                      | Oper/Reliab        | 26.2         | 2.1     | 4.5     | 0.9     | 0.8     | 0.4     | 0.4     | 0.3     | 23.3 | 58.9  |
| 600 Horsepower (hp) Engine Conversion             |                    |              |         |         |         |         |         |         |         |      |       |
| 1-02-02-0551                                      | Reliability        | 12.6         | 0.2     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 12.8  |
| LLM Disable Switch                                |                    |              |         |         |         |         |         |         |         |      |       |
| 1-03-02-0559                                      | Safety             | 0.6          | 0.1     | 0.1     | 0.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.9   |
| Cordless Vehicular Intercommunication (VIS)       |                    |              |         |         |         |         |         |         |         |      |       |
| 1-04-02-0565                                      | Operational        | 0.0          | 0.0     | 0.0     | 3.0     | 0.1     | 0.1     | 0.1     | 0.0     | 0.0  | 3.3   |

**Exhibit P-40M, Budget Item Justification Sheet**

Date: February 2005

|   |  |  |   |                                 |  |  |  |  |  |  |  |  |
|---|--|--|---|---------------------------------|--|--|--|--|--|--|--|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles |  |  | P-1 Item Nomenclature<br>MLRS MODS (C67500) |                                 |  |  |  |  |  |  |  |  |
| Program Elements for Code B Items:  |  |  | Code:                                       | Other Related Program Elements: |  |  |  |  |  |  |  |  |

| OSIP NO.  | Classification | Fiscal Years |         |         |         |         |         |         |         |      | TC    | Total |
|---|----------------|--------------|---------|---------|---------|---------|---------|---------|---------|------|-------|-------|
|   |                | 2004 & PR    | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |      |       |       |
| Machine Gun Mount                               |                |              |         |         |         |         |         |         |         |      |       |       |
| 1-04-02-0566                                    | Operational    | 0.0          | 0.0     | 0.4     | 0.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.0   | 0.5   |
| Global Positioning System (GPS) Upgrades        |                |              |         |         |         |         |         |         |         |      |       |       |
| 1-04-02-0568                                    | Operational    | 0.0          | 0.0     | 0.0     | 0.2     | 3.9     | 1.4     | 2.6     | 2.7     | 3.7  | 14.5  |       |
| M993A1 Carrier Block I Upgrades                 |                |              |         |         |         |         |         |         |         |      |       |       |
| 1-04-02-0567                                    | Reliability    | 0.0          | 0.0     | 3.4     | 1.7     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 5.1   |       |
| Auxiliary Power Unit/Environmental Control Unit |                |              |         |         |         |         |         |         |         |      |       |       |
| 1-02-02-0552                                    | Operational    | 0.0          | 7.4     | 4.8     | 0.7     | 0.6     | 0.0     | 0.0     | 0.0     | 0.0  | 13.5  |       |
| Elevation Resolver                              |                |              |         |         |         |         |         |         |         |      |       |       |
| 1-05-02-0572                                    | Reliability    | 0.0          | 0.0     | 0.5     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.5   |       |
| S-250 Shelter                                   |                |              |         |         |         |         |         |         |         |      |       |       |
| 1-05-02-0571                                    | Operational    | 0.0          | 0.0     | 0.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.1   |       |
| Totals  |                | 308.3        | 18.9    | 14.3    | 6.8     | 5.5     | 1.9     | 3.1     | 3.0     | 27.0 | 388.8 |       |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Selective Availability Anti-Spoofing Module [MOD 3] 1-96-03-0534

MODELS OF SYSTEM AFFECTED: Multiple Launch Rocket System (MLRS)

DESCRIPTION/JUSTIFICATION:

Enhancements to the Global Positioning System (GPS) are required to prevent tampering from outside sources. This change is required by the National Security Agency (NSA) to provide tamper resistant measures to maintain national security with respect to GPS downlinks. The enhancements will be initially provided through the Selective Availability Anti-Spoofing Module (SAASM). These programs will be compatible with the emerging Electronic Key Management System (EKMS) and will incorporate a NavStrike receiver to the GPS Interface Circuit Card Assembly (CCA), which is a CCA within the Position Navigation Unit (PNU), a Line Replaceable Unit (LRU) of the Improved Fire Control System (IFCS) family. This change along with back plane updates and the addition of the Power Personal Computer 2 Executive Processor (PPC2EP) card to the Low Rate Initial Production (LRIP) 1 and LRIP 2 PNUs will be incorporated in the PNU. This modification program will retrofit 154 M270A1 Launchers.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The current SAASM compliant receiver has been integrated onto the GPS Interface receiver to the PNU and cut into the M270A1 production at LRIP 5.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |    |    |    | FY 2007 |    |    |   | FY 2008 |    |    |   | FY 2009 |   |   |   |   |  |
|---------|---------|---|---|---|---------|----|----|----|---------|----|----|---|---------|----|----|---|---------|---|---|---|---|--|
|         | Totals  | 1 | 2 | 3 | 4       | 1  | 2  | 3  | 4       | 1  | 2  | 3 | 4       | 1  | 2  | 3 | 4       | 1 | 2 | 3 | 4 |  |
| Inputs  | 0       |   |   |   |         | 39 | 39 | 38 | 38      |    |    |   |         |    |    |   |         |   |   |   |   |  |
| Outputs | 0       |   |   |   |         |    | 19 | 21 | 19      | 19 | 13 | 0 | 19      | 19 | 19 | 6 |         |   |   |   |   |  |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |  |  |  |     |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|--|--|--|-----|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |  |  |  |     |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 154 |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 154 |

|                           |         |                          |          |                      |           |
|---------------------------|---------|--------------------------|----------|----------------------|-----------|
| METHOD OF IMPLEMENTATION: | Depot   | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 12 Months |
| Contract Dates:           | FY 2006 |                          | FY 2007  |                      | FY 2008   |
| Delivery Date:            | FY 2006 |                          | FY 2007  |                      | FY 2008   |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Selective Availability Anti-Spoofing Module [MOD 3] 1-96-03-0534

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |     |
|---------------------------------|----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|-----|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$  |
|                                 | <b>RDT&amp;E</b>     | 0   |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Procurement</b>              | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Kit Quantity                    | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits               | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits, Nonrecurring | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Equipment                       | 0                    |     | 154     | 7.5 |         |     |         |     |         |     |         |     |         |     |         |     |     |     | 154   | 7.5 |
| Equipment, Nonrecurring         | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Engineering Change Orders       | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Data                            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Training Equipment              | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Support Equipment               | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Other                           | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Interim Contractor Support      | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Installation of Hardware</b> | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2002 & Prior Equip -- Kits    | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2003 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2004 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2005 Equip -- Kits            | 0                    |     |         |     | 40      | 0.0 | 51      | 0.0 | 63      | 0.0 |         |     |         |     |         |     |     |     | 154   |     |
| FY2006 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2007 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2008 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2009 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| TC Equip- Kits                  | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Total Installment</b>        | 0                    | 0.0 |         | 0.0 | 40      | 0.0 | 51      | 0.0 | 63      | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 | 154   | 0.0 |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 7.5 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 7.5 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Improved Weapons Interface Unit Modification MOD [MOD 5] 1-99-03-0546

MODELS OF SYSTEM AFFECTED: Multiple Launch Rocket System (MLRS)

DESCRIPTION/JUSTIFICATION:

The development of the Guided MLRS Rocket and High Mobility Artillery Rocket System (HIMARS) has generated a requirement for a new circuit card to be added to the current Weapons Interface Unit (WIU). This WIU is one of the new Line Replaceable Units (LRU), which are components of the Improved Fire Control System (IFCS) which will be incorporated into the M270A1 Launcher. This LRU will be known as the Improved Weapons Interface Unit (IWIU) and is being delivered with all Full Rate Production (FRP) 1 production M270A1 deliveries. The major changes of this IWIU are the incorporation of a new circuit card assembly, known as the Ethernet Hub card, and the replacement of the current WIU compatible W20 Cable with a W420 cable assembly. This new IWIU system will contain signal distribution functions, which will be incorporated into the IWIU instead of requiring a separate function being placed in each individual new rocket. These changes are planned for incorporation into 195 Launchers. Procurement is required to retrofit the IWIU to Launchers produced in Low Rate Initial Production (LRIP) 1 - LRIP 5. This modification is essential to standardize WIU configurations and eliminate enormous development, production, and modification costs to new missiles and rockets.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The development, which began in 3QFY01, has been completed and incorporated into the FRP 1 production.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |    | FY 2006 |    |    |    | FY 2007 |    |    |    | FY 2008 |    |    |    | FY 2009 |   |   |   |
|---------|---------|---|---|----|---------|----|----|----|---------|----|----|----|---------|----|----|----|---------|---|---|---|
|         | 1       | 2 | 3 | 4  | 1       | 2  | 3  | 4  | 1       | 2  | 3  | 4  | 1       | 2  | 3  | 4  | 1       | 2 | 3 | 4 |
| Totals  |         |   |   |    |         |    |    |    |         |    |    |    |         |    |    |    |         |   |   |   |
| Inputs  |         | 4 | 9 | 9  | 24      | 24 | 24 | 24 | 24      | 24 | 24 | 5  |         |    |    |    |         |   |   |   |
| Outputs |         |   |   | 14 | 19      | 0  | 19 | 13 | 19      | 0  | 19 | 11 | 19      | 19 | 19 | 11 | 13      |   |   |   |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 195    |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 195    |

|                           |         |                          |          |                      |          |
|---------------------------|---------|--------------------------|----------|----------------------|----------|
| METHOD OF IMPLEMENTATION: | Depot   | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 9 Months |
| Contract Dates:           | FY 2006 |                          | FY 2007  |                      | FY 2008  |
| Delivery Date:            | FY 2006 |                          | FY 2007  |                      | FY 2008  |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Improved Weapons Interface Unit Modification MOD [MOD 5] 1-99-03-0546

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |      | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |     |      |
|---------------------------------|----------------------|------|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|-----|------|
|                                 | Qty                  | \$   | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$  |      |
|                                 | <b>RDT&amp;E</b>     | 0    |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| <b>Procurement</b>              | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| Kit Quantity                    | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| Installation Kits               | 50                   | 0.2  | 145     | 0.6 |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       | 195 | 0.8  |
| Installation Kits, Nonrecurring |                      |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| Equipment                       | 161                  | 3.8  |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       | 161 | 3.8  |
| Equipment, Nonrecurring         | 34                   | 6.7  |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       | 34  | 6.7  |
| Engineering Change Orders       | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| Data                            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| Training Equipment              | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| Support Equipment               |                      | 0.7  |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     | 0.7  |
| Other                           |                      | 0.1  |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     | 0.1  |
| Interim Contractor Support      | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| <b>Installation of Hardware</b> | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| FY2002 & Prior Equip -- Kits    | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| FY2003 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| FY2004 Equip -- Kits            | 0                    |      | 14      | 0.0 | 36      | 0.0 |         |     |         |     |         |     |         |     |         |     |     |     |       | 50  |      |
| FY2005 Equip -- Kits            | 0                    |      |         |     | 15      | 0.0 | 49      | 0.1 | 68      | 0.1 | 13      | 0.0 |         |     |         |     |     |     |       | 145 | 0.2  |
| FY2006 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| FY2007 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| FY2008 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| FY2009 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| TC Equip- Kits                  | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |      |
| <b>Total Installment</b>        | 0                    | 0.0  | 14      | 0.0 | 51      | 0.0 | 49      | 0.1 | 68      | 0.1 | 13      | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 195 | 0.2  |
| <b>Total Procurement Cost</b>   |                      | 11.5 |         | 0.6 |         | 0.0 |         | 0.1 |         | 0.1 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       |     | 12.3 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Obsolescence Mitigation/ECP Reliability Intg [MOD 7] 1-99-03-Obse

MODELS OF SYSTEM AFFECTED: Multiple Launch Rocket System (MLRS)

DESCRIPTION/JUSTIFICATION:

Technology obsolescence is dictating the replacement of many launcher components to insure a cost effective approach to Integrated Logistics Support (ILS). Circuit cards in the Line Replaceable Units (LRU) are rapidly approaching obsolescence. Funding on this program procures modification kits that will incorporate improved components necessary to replace parts which have become cost prohibitive and are no longer available. In addition, this modification reestablished the MLRS baseline at the optimal configuration for integration of the Improved Fire Control System (IFCS) and the Improved Launcher Mechanical System (ILMS) by aiding the calibration of the system, providing required accuracy levels for new and future munitions, increasing reliability of early configuration of the launcher which reduces operational and support costs and eliminating noise and multiple software requirements. Rapid advancing technology within the commercial computer market has provided IFCS enormous obsolescence issues; such as the current inability to buy DoD approved components making up the Power Personal Computer 2 Executive Processor (PPC2EP) card. Additional hardware requirements are expected due to the increase of digitized equipment in the cab. In addition, technology obsolescence for vehicle carrier components such as the ILMS Centry Engine Governor components, Improved Electronic Distribution Box, and 600 horsepower (hp) diesel engine are constant issues that require funding through this effort. This modification program will reduce operating cost and help mitigate obsolescence.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Modifications will be incorporated into production based on obsolescence analysis and determination.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |   |   |   |   |  |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---|--|
|         | Totals  | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4 |  |
| Inputs  | 0       |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |   |  |
| Outputs | 0       |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |   |  |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |  |  |  |  |   |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|--|--|--|--|---|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |  |  |  |  |   |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  |  | 0 |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  |  |   |

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 0 Months PRODUCTION LEADTIME: 0 Months

Contract Dates: FY 2006 FY 2007 FY 2008

Delivery Date: FY 2006 FY 2007 FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Obsolescence Mitigation/ECP Reliability Intg [MOD 7] 1-99-03-Obse

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |      | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |      | TOTAL |      |  |
|---------------------------------|----------------------|------|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|------|-------|------|--|
|                                 | Qty                  | \$   | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$   | Qty   | \$   |  |
|                                 | <b>RDT&amp;E</b>     | 0    |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| <b>Procurement</b>              | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Kit Quantity                    | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Installation Kits               | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Installation Kits, Nonrecurring | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Equipment                       | 0                    | 26.2 |         | 2.1 |         | 4.5 |         | 0.9 |         | 0.8 |         | 0.4 |         | 0.4 |         | 0.3 |     | 23.3 |       | 58.9 |  |
| Equipment, Nonrecurring         | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Engineering Change Orders       | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Data                            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Training Equipment              | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Support Equipment               | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Other                           | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| Interim Contractor Support      | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| <b>Installation of Hardware</b> | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2002 & Prior Equip -- Kits    | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2003 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2004 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2005 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2006 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2007 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2008 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| FY2009 Equip -- Kits            | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| TC Equip- Kits                  | 0                    |      |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |  |
| <b>Total Installment</b>        | 0                    | 0.0  |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0  |       | 0.0  |  |
| <b>Total Procurement Cost</b>   |                      | 26.2 |         | 2.1 |         | 4.5 |         | 0.9 |         | 0.8 |         | 0.4 |         | 0.4 |         | 0.3 |     | 23.3 |       | 58.9 |  |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: 600 Horsepower (hp) Engine Conversion [MOD 8] 1-02-02-0551

MODELS OF SYSTEM AFFECTED: Multiple Launch Rocket System (MLRS)

DESCRIPTION/JUSTIFICATION:

This modification replaces the current 500 hp Cummins Diesel Engine, which is no longer available, with a higher powered 600 hp Cummins Diesel Engine. Components from the existing 500 hp Engines will be remanufactured by Cummins to the 600 hp configuration and the Carrier will need to be reconfigured with modified muffler, air cleaner, cold start, electrical, and fuel systems to integrate the 600 hp Engine. This modification is necessary because Cummins no longer produces the 500 hp engine and the interfaces to the Centry/Engine Governor components are already obsolete. The 600 hp engine configuration will be the only engine Cummins will support for future production and spares. The 600 hp engine will be supportable for at least an additional 10 years. It is more fuel efficient, has almost four times the reliability as the 500 hp engine, has reduced emissions over the 500 hp engine, and will provide commonality with the Bradley A2 & A3 family of vehicles. The total modification requirement will be for 154 vehicles at various installations within the US and Korea.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The development effort for integration into the M270A1 Launcher has been completed. This change began incorporation into Low Rate Initial Production (LRIP) 5 production in 3QFY03. Deliveries of the modification kits and remanufactured engines began in 4QFY03. An initial validation of modification documentation occurred 1QFY04 at Red River Army Depot (RRAD).

Installation Schedule:

| Pr Yr   | FY 2005 |    |    |    | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |   |   |   |
|---------|---------|----|----|----|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|         | 1       | 2  | 3  | 4  | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| Totals  |         |    |    |    |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Inputs  | 154     |    |    |    |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Outputs | 64      | 19 | 19 | 21 | 20      | 9 | 0 | 2 |         |   |   |   |         |   |   |   |         |   |   |   |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 154    |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 154    |

|                           |         |                          |          |                      |          |
|---------------------------|---------|--------------------------|----------|----------------------|----------|
| METHOD OF IMPLEMENTATION: | Depot   | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 3 Months |
| Contract Dates:           | FY 2006 |                          | FY 2007  |                      | FY 2008  |
| Delivery Date:            | FY 2006 |                          | FY 2007  |                      | FY 2008  |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): 600 Horsepower (hp) Engine Conversion [MOD 8] 1-02-02-0551

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |             | FY 2005   |            | FY 2006   |            | FY 2007 |            | FY 2008 |            | FY 2009 |            | FY 2010 |            | FY 2011 |            | TC  |            | TOTAL      |             |     |
|---------------------------------|----------------------|-------------|-----------|------------|-----------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|------------|-----|------------|------------|-------------|-----|
|                                 | Qty                  | \$          | Qty       | \$         | Qty       | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty | \$         | Qty        | \$          |     |
|                                 | <b>RDT&amp;E</b>     | <b>0</b>    |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| <b>Procurement</b>              | <b>0</b>             |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| Kit Quantity                    | 154                  | 3.1         |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            | 154        | 3.1         |     |
| Installation Kits               | 154                  | 5.6         |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            | 154        | 5.6         |     |
| Installation Kits, Nonrecurring | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| Equipment                       | 137                  | 0.6         |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            | 137        | 0.6         |     |
| Equipment, Nonrecurring         | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| Engineering Change Orders       | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| Data                            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| Training Equipment              | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| Support Equipment               | 1                    | 0.2         |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            | 1          | 0.2         |     |
| Other                           |                      | 0.0         |           | 0.2        |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             | 0.2 |
| Interim Contractor Support      |                      | 0.0         |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| <b>Installation of Hardware</b> | <b>0</b>             |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2002 & Prior Equip -- Kits    |                      |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2003 Equip -- Kits            | 64                   | 3.1         | 79        |            | 11        |            |         |            |         |            |         |            |         |            |         |            |     |            | 154        | 3.1         |     |
| FY2004 Equip -- Kits            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2005 Equip -- Kits            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2006 Equip -- Kits            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2007 Equip -- Kits            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2008 Equip -- Kits            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| FY2009 Equip -- Kits            | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| TC Equip- Kits                  | 0                    |             |           |            |           |            |         |            |         |            |         |            |         |            |         |            |     |            |            |             |     |
| <b>Total Installment</b>        | <b>64</b>            | <b>3.1</b>  | <b>79</b> | <b>0.0</b> | <b>11</b> | <b>0.0</b> |         | <b>0.0</b> |     | <b>0.0</b> | <b>154</b> | <b>3.1</b>  |     |
| <b>Total Procurement Cost</b>   |                      | <b>12.6</b> |           | <b>0.2</b> |           | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> |     | <b>0.0</b> |            | <b>12.8</b> |     |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Cordless Vehicular Intercommunication (VIS) [MOD 10] 1-04-02-0565

MODELS OF SYSTEM AFFECTED: Multiple Launch Rocket System (MLRS)

DESCRIPTION/JUSTIFICATION:

The TRADOC Systems Manager (TSM) - Rockets and Missiles (RAMS) has provided a user requirement for a wireless Vehicle Intercommunications System (VIS) to be applied to both the M270A1 and HIMARS launchers. This requirement is primarily an operational issue, but addresses both issues relating to maintenance and safety. The adoption of a Cordless VIS will allow constant communications during operations outside of the cab to include reloading, maintenance, and vehicle movement. Coordination between crewmembers is currently difficult given the noise level of the launcher. The use of a Cordless VIS capability greatly facilitates these types of operations because crew conversations are not dependent upon face-to-face coordination. Due to an uninterrupted communication system, system safety will be improved. The design of this system will also reduce damage to the current helmets and cables that currently exist.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

The analysis for best technical approach began in FY03 and in order to decrease development cost, our system elected to go chose the technical approach consistent with the U.S. Army's Mounted Warrior program. The procurement effort is planned for FY07.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |    |    |    | FY 2009 |    |    |    |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|----|----|----|---------|----|----|----|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2  | 3  | 4  | 1       | 2  | 3  | 4  |
| Totals  |         |   |   |   |         |   |   |   |         |   |   |   | 57      | 57 | 57 | 58 |         |    |    |    |
| Inputs  | 0       |   |   |   |         |   |   |   |         |   |   |   |         |    |    |    |         |    |    |    |
| Outputs | 0       |   |   |   |         |   |   |   |         |   |   |   |         |    |    | 19 | 19      | 19 | 19 | 19 |

  

|         | FY 2010 |    |    |    | FY 2011 |    |    |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|----|----|----|---------|----|----|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2  | 3  | 4  | 1       | 2  | 3  | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |    |    |    |         |    |    |   |         |   |   |   |         |   |   |   |             | 229    |
| Outputs | 19      | 19 | 19 | 19 | 20      | 19 | 19 |   |         |   |   |   |         |   |   |   |             | 229    |

METHOD OF IMPLEMENTATION: Depot ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 9 Months  
 Contract Dates: FY 2006 FY 2007 Jan 07 FY 2008  
 Delivery Date: FY 2006 FY 2007 Oct 07 FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Cordless Vehicular Intercommunication (VIS) [MOD 10] 1-04-02-0565

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |            | FY 2005 |            | FY 2006 |            | FY 2007 |            | FY 2008   |            | FY 2009   |            | FY 2010   |            | FY 2011 |            | TC  |            | TOTAL      |            |  |
|---------------------------------|----------------------|------------|---------|------------|---------|------------|---------|------------|-----------|------------|-----------|------------|-----------|------------|---------|------------|-----|------------|------------|------------|--|
|                                 | Qty                  | \$         | Qty     | \$         | Qty     | \$         | Qty     | \$         | Qty       | \$         | Qty       | \$         | Qty       | \$         | Qty     | \$         | Qty | \$         | Qty        | \$         |  |
|                                 | <b>RDT&amp;E</b>     | <b>0</b>   |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| <b>Procurement</b>              | <b>0</b>             |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Kit Quantity                    | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Installation Kits               | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Installation Kits, Nonrecurring | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Equipment                       | 0                    |            |         |            |         |            | 229     | 3.0        |           |            |           |            |           |            |         |            |     |            | 229        | 3.0        |  |
| Equipment, Nonrecurring         | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Engineering Change Orders       | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Data                            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Training Equipment              | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Support Equipment               | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Other                           | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| Interim Contractor Support      | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| <b>Installation of Hardware</b> | <b>0</b>             |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2002 & Prior Equip -- Kits    | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2003 Equip -- Kits            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2004 Equip -- Kits            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2005 Equip -- Kits            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2006 Equip -- Kits            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2007 Equip -- Kits            | 0                    |            |         |            |         |            |         |            | 76        | 0.1        | 76        | 0.1        | 77        | 0.1        |         |            |     |            | 229        | 0.3        |  |
| FY2008 Equip -- Kits            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| FY2009 Equip -- Kits            | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| TC Equip- Kits                  | 0                    |            |         |            |         |            |         |            |           |            |           |            |           |            |         |            |     |            |            |            |  |
| <b>Total Installment</b>        | <b>0</b>             | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> | <b>76</b> | <b>0.1</b> | <b>76</b> | <b>0.1</b> | <b>77</b> | <b>0.1</b> |         | <b>0.0</b> |     | <b>0.0</b> | <b>229</b> | <b>0.3</b> |  |
| <b>Total Procurement Cost</b>   |                      | <b>0.0</b> |         | <b>0.0</b> |         | <b>0.0</b> |         | <b>3.0</b> |           | <b>0.1</b> |           | <b>0.1</b> |           | <b>0.1</b> |         | <b>0.0</b> |     | <b>0.0</b> |            | <b>3.3</b> |  |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: M993A1 Carrier Block I Upgrades [MOD 13] 1-04-02-0567

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

Subsequent to the fielding of the M270A1 Launcher, the vehicle subsystem, the M993A1 Carrier has seen the need for several reliability changes. In order to reduce system failures and improve overall reliability, modifications are required to the Electronic Control Module (ECM), Centry Electrical Harness Assembly, Fuel Pump, transmission step shield, Centry Fault light, and the current 300 Amp generator. Under the current conditions "engine loping" occurs and with the software upgrade to the ECM and hardware changes added to the Fuel Pump, this problem could be eliminated. The step shield change will prevent crewman from stepping on the engine and transmission components causing the throttle position sensor to bind. The Centry Fault Light Relocation is an after action report issue from Operation Iraqi Freedom, requesting this light be relocated to a more appropriate location in the cab. This modification will allow crewman to notice system faults immediately rather than during other maintenance times. The High Reliability 300 Amp Alternator is required to replace one of the system's top ten cost drivers and improve system reliability and improve operational capability. These modifications are planned for application to 230 M993A1 Carriers.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Development of the ECM, Centry Wiring Harness, fuel pump, transmission step shield is being worked under work directives with the Carrier's System Engineering Support (STS) contract. The Centry fault light relocation is still under investigation for best technical approach. The testing for the pre-production models of the High Reliability 300 Amp Generator began in 2QFY05.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |    |    |    | FY 2008 |    |    |    | FY 2009 |   |   |   |   |  |
|---------|---------|---|---|---|---------|---|---|---|---------|----|----|----|---------|----|----|----|---------|---|---|---|---|--|
|         | Totals  | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4       | 1  | 2  | 3  | 4       | 1  | 2  | 3  | 4       | 1 | 2 | 3 | 4 |  |
| Inputs  |         |   |   |   |         |   |   |   |         | 58 | 58 | 57 | 57      |    |    |    |         |   |   |   |   |  |
| Outputs |         |   |   |   |         |   |   |   |         |    |    |    | 57      | 57 | 57 | 59 |         |   |   |   |   |  |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |  |  |  |     |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|--|--|--|-----|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |  |  |  |     |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 230 |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 230 |

|                           |                |                          |          |                      |          |
|---------------------------|----------------|--------------------------|----------|----------------------|----------|
| METHOD OF IMPLEMENTATION: | Depot          | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 9 Months |
| Contract Dates:           | FY 2006 Jan 06 | FY 2007                  |          | FY 2008              |          |
| Delivery Date:            | FY 2006 Oct 06 | FY 2007                  |          | FY 2008              |          |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): M993A1 Carrier Block I Upgrades [MOD 13] 1-04-02-0567

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |     |
|---------------------------------|----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|-----|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$  |
|                                 | <b>RDT&amp;E</b>     |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Procurement</b>              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Kit Quantity                    |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits               |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits, Nonrecurring |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Equipment                       |                      |     |         |     | 230     | 3.4 |         |     |         |     |         |     |         |     |         |     |     |     | 230   | 3.4 |
| Equipment, Nonrecurring         |                      |     |         |     | 40      | 0.0 |         |     |         |     |         |     |         |     |         |     |     |     | 40    |     |
| Engineering Change Orders       |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Data                            |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Training Equipment              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Support Equipment               |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Other                           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Interim Contractor Support      |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Installation of Hardware</b> |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2004 & Prior Equip -- Kits   |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2005 -- Kits                 |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2006 Equip -- Kits           |                      |     |         |     |         |     | 230     | 1.7 |         |     |         |     |         |     |         |     |     |     | 230   | 1.7 |
| FY 2007 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2008 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2009 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2010 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2011 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| TC Equip- Kits                  |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Total Installment</b>        |                      | 0.0 |         | 0.0 |         | 0.0 | 230     | 1.7 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 | 230   | 1.7 |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 0.0 |         | 3.4 |         | 1.7 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 5.1 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Auxiliary Power Unit/Environmental Control Unit [MOD 14] 1-02-02-0552

MODELS OF SYSTEM AFFECTED: Multiple Launch Rocket System (MLRS)

DESCRIPTION/JUSTIFICATION:

An Auxiliary Power Unit/Environmental Control Unit (APU/ECU) system has been requested by the user and is a direct result of the Manpower & Personnel Integration (MANPRINT) deficiencies identified at the M270A1 Initial Operational Test & Evaluation (IOTE). Significant electric power distribution, storage, and management problems have occurred over the previous years between the launcher subsystem and the carrier subsystem indicating a need to provide auxiliary electrical power for the launcher vehicle. In addition, since the cab of the M270/M270A1 Launcher is sealed during firing and potential launch operations there is a need to provide environmental control for the crew. Digitization changes have added additional electronic equipment in the cab that requires additional power and requires measures for reducing heat. The following two issues will be addressed within the APU/ECU: (1) An auxiliary electrical power source to charge vehicle batteries and increase weapon system effectiveness during silent waiting; and (2) environmental control for the crew in order to meet human factors environmental requirements and to improve electronic equipment reliability. This modification would allow deletion of the current personnel heater within the cab, which has consistently suffered reliability failures. A total of 227 APU/ECU kits will be procured to support the fleet of M270A1 Launchers.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Product In-Process Reviews began in 1QFY04 with the development process/design analysis continuing through 2QFY05. Prototype hardware has been procured for integration and qualification testing. Prototype hardware deliveries are expected to begin in late 2QFY05, with testing to occur in early 3QFY05. The contract award is anticipated for 3QFY05.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |    |    |    | FY 2007 |    |    |    | FY 2008 |    |    |    | FY 2009 |   |   |   |   |  |
|---------|---------|---|---|---|---------|----|----|----|---------|----|----|----|---------|----|----|----|---------|---|---|---|---|--|
|         | Totals  | 1 | 2 | 3 | 4       | 1  | 2  | 3  | 4       | 1  | 2  | 3  | 4       | 1  | 2  | 3  | 4       | 1 | 2 | 3 | 4 |  |
| Inputs  |         |   |   |   | 37      | 37 | 38 | 38 | 19      | 19 | 19 | 20 |         |    |    |    |         |   |   |   |   |  |
| Outputs | 0       |   |   |   |         | 19 | 19 | 19 | 38      | 19 | 19 | 19 | 9       | 19 | 19 | 19 | 9       |   |   |   |   |  |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |  |  |  |     |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|--|--|--|-----|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |  |  |  |     |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 227 |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 227 |

METHOD OF IMPLEMENTATION: Depot ADMINISTRATIVE LEADTIME: 3 Months PRODUCTION LEADTIME: 6 Months  
 Contract Dates: FY 2006 Jan 06 FY 2007 FY 2008  
 Delivery Date: FY 2006 Jul 06 FY 2007 FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Auxiliary Power Unit/Environmental Control Unit [MOD 14] 1-02-02-0552

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004   |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |      |
|---------------------------------|-----------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|------|
|                                 | and Prior |     | Qty     | \$  | Qty | \$  | Qty   | \$   |
|                                 | Qty       | \$  |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>RDT&amp;E</b>                | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>Procurement</b>              | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Kit Quantity                    | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Installation Kits               |           |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Installation Kits, Nonrecurring | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Equipment                       |           |     | 150     | 7.4 | 77      | 3.8 |         |     |         |     |         |     |         |     |         |     |     |     | 227   | 11.2 |
| Equipment, Nonrecurring         | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Engineering Change Orders       | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Data                            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Training Equipment              | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Support Equipment               | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Other                           | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Interim Contractor Support      | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>Installation of Hardware</b> | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY2002 & Prior Equip -- Kits    | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY2003 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY2004 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY2005 Equip -- Kits            | 0         |     |         |     | 95      | 1.0 | 55      | 0.6 |         |     |         |     |         |     |         |     |     |     | 150   | 1.6  |
| FY2006 Equip -- Kits            | 0         |     |         |     |         |     | 11      | 0.1 | 66      | 0.6 |         |     |         |     |         |     |     |     | 77    | 0.7  |
| FY2007 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY2008 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY2009 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| TC Equip- Kits                  | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>Total Installment</b>        | 0         | 0.0 |         | 0.0 | 95      | 1.0 | 66      | 0.7 | 66      | 0.6 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 | 227   | 2.3  |
| <b>Total Procurement Cost</b>   |           | 0.0 |         | 7.4 |         | 4.8 |         | 0.7 |         | 0.6 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 13.5 |

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No: P-1 Item Nomenclature  
 Missile Procurement, Army /3/Modification of missiles HIMARS MODIFICATIONS: (NON AAO) (C67501)

Program Elements for Code B Items: Code: Other Related Program Elements: C67500

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       |             |         | 2.0     | 0.5     | 8.0     | 9.2     | 10.4    | 11.7    | 11.9    | 9.2     | 90.6        | 153.4      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             |         | 2.0     | 0.5     | 8.0     | 9.2     | 10.4    | 11.7    | 11.9    | 9.2     | 90.6        | 153.4      |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         | 2.0     | 0.5     | 8.0     | 9.2     | 10.4    | 11.7    | 11.9    | 9.2     | 90.6        | 153.4      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

The High Mobility Artillery Rocket System (HIMARS), is a C-130 Transportable launcher mounted on a Family of Medium Tactical Vehicles (FMTV) chassis. The HIMARS is capable of firing either six Multiple Rocket Launcher System (MLRS) Family of Munitions (MFOM) rockets or one Army Tactical Missile System (ATACMS) Family of Munitions (AFOM) missile, including precision munitions, to a range of 300KM. Modification kits will be procured for the HIMARS Launcher and associated training and ground support equipment. These modifications are vital to the Current and Future Forces and are projected to provide an increase in crew protection via an up-armored cab, decrease Operations & Support (O&S) costs, reduce logistical impacts and mitigate obsolescence.

**Justification:**

FY06/07 procures the Add on Armor (AoA), Universal Fire Control System (UFCS), Machine Gun Mounts, Carrier Upgrades, Reliability/Obsolescence Mitigation, Position Navigation Unit/Global Positioning System (PNU/GPS) upgrades, and Cordless Vehicular Intercommunication Systems (VIS). FY06/07 funds support the continuation of the HIMARS modification program.

# Exhibit P-40M, Budget Item Justification Sheet

Date: February 2005

|   |       |   |  |
|---|-------|---|--|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /3/Modification of missiles |       | P-1 Item Nomenclature<br>HIMARS MODIFICATIONS: (NON AAO) (C67501) |  |
| Program Elements for Code B Items:  | Code: | Other Related Program Elements:<br>C67500                         |  |

| OSIP NO.   | Classification        | Fiscal Years |         |         |         |         |         |         |         |      |       |     |
|--|-----------------------|--------------|---------|---------|---------|---------|---------|---------|---------|------|-------|-----|
|  |                       | 2004 & PR    | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | TC   | Total |     |
| Machine Gun Mount                                  |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-03-02-0560                                       | Operational           | 0.0          | 0.0     | 0.4     | 0.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.0   | 0.5 |
| Carrier Upgrades                                   |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-03-02-0561                                       | Reliability           | 0.0          | 0.0     | 0.1     | 0.2     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.0   | 0.3 |
| Manifold   |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-04-02-0563                                       | Reliability           | 1.4          | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 0.0   | 1.4 |
| Reliability/Obsolescence Mitigation                |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-03-02-0556                                       | Operation/Reliability | 0.6          | 0.4     | 0.9     | 1.4     | 1.9     | 2.0     | 2.0     | 1.9     | 10.9 | 22.0  |     |
| PNU/GPS Upgrades                                   |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-04-02-0569                                       | Operational           | 0.0          | 0.0     | 0.0     | 0.1     | 0.2     | 0.1     | 0.0     | 0.0     | 0.0  | 0.4   |     |
| Cordless Vehicular Intercommunication System (VIS) |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-03-02-0557                                       | Operational           | 0.0          | 0.0     | 1.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 1.1   |     |
| Add on Armor (AoA)                                 |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-05-02-0570                                       | Safety                | 0.0          | 0.1     | 2.8     | 0.4     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0  | 3.3   |     |
| Universal Fire Control System (UFCS)               |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-05-02-0568                                       | Operational           | 0.0          | 0.0     | 2.7     | 7.2     | 0.9     | 0.0     | 0.0     | 0.0     | 48.2 | 59.0  |     |
| Increased Crew Protection                          |                       |              |         |         |         |         |         |         |         |      |       |     |
| 1-05-02-0569                                       | Operational           | 0.0          | 0.0     | 0.0     | 0.0     | 7.4     | 9.5     | 9.8     | 7.4     | 3.0  | 37.1  |     |
| Totals   |                       | 2.0          | 0.5     | 8.0     | 9.4     | 10.4    | 11.6    | 11.8    | 9.3     | 62.1 | 125.1 |     |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Add on Armor (AoA) [MOD 7] 1-05-02-0570

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

This modification will call for the application of a Add On Armor (AoA) kit as the first phase of the Increased Crew Protection modification. This requirement is to provide additional protection to the HIMARS crew from small arms fire and artillery shell/Improvised Explosive Device (IED) fragments during manning the launcher cab. This modification is being executed to comply with the U.S. Army's intent to armor all tactical wheel vehicles (TWV) deployed in support of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF). A selected quantity of M142 HIMARS vehicles will have AoA kits installed in theater or prior to deployment of theater. This guidance is in accordance with the priorities established by the Combined Forces Land Component Command. The planned contents of this AoA kit will be components from the Stewart and Stevenson (S&S) Low Signature Armored Cab (LCAC) with prototype development specifically for usage on the M142 HIMARS.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

An eight to nine month acquisition cycle is planned to perform engineering analysis, preliminary design, prototyping, fabrication, manufacturing planning, and kit delivery. Design is expected to start in 2FY05 and kit deliveries are planned for 1QFY06.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |    |   |    | FY 2008 |    |   |   | FY 2009 |   |   |   |
|---------|---------|---|---|---|---------|---|---|---|---------|----|---|----|---------|----|---|---|---------|---|---|---|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2  | 3 | 4  | 1       | 2  | 3 | 4 | 1       | 2 | 3 | 4 |
| Totals  |         |   |   |   | 1       |   |   |   | 10      | 10 | 9 | 9  | 19      | 19 |   |   |         |   |   |   |
| Inputs  |         |   |   |   | 1       |   |   |   |         |    |   |    |         |    |   |   |         |   |   |   |
| Outputs |         |   |   |   |         | 1 |   |   |         |    |   | 19 | 19      |    |   |   |         |   |   |   |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 39     |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 39     |

|                           |                |                          |          |                      |          |
|---------------------------|----------------|--------------------------|----------|----------------------|----------|
| METHOD OF IMPLEMENTATION: | Depot          | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 9 Months |
| Contract Dates:           | FY 2006 Jan 06 | FY 2007                  |          | FY 2008              |          |
| Delivery Date:            | FY 2006 Oct 06 | FY 2007                  |          | FY 2008              |          |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Add on Armor (AoA) [MOD 7] 1-05-02-0570

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |     |
|---------------------------------|----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|-----|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$  |
|                                 | <b>RDT&amp;E</b>     |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Procurement</b>              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Kit Quantity                    |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits               |                      |     | 1       | 0.1 | 38      | 2.8 |         |     |         |     |         |     |         |     |         |     |     |     | 39    | 2.9 |
| Installation Kits, Nonrecurring |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Equipment                       |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Equipment, Nonrecurring         |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Engineering Change Orders       |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Data                            |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Training Equipment              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Support Equipment               |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Other                           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Interim Contractor Support      |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Installation of Hardware</b> |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2004 & Prior Equip -- Kits   |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2005 -- Kits                 |                      |     | 1       | 0.0 |         |     |         |     |         |     |         |     |         |     |         |     |     |     | 1     |     |
| FY 2006 Equip -- Kits           |                      |     |         |     |         |     | 38      | 0.4 |         |     |         |     |         |     |         |     |     |     | 38    | 0.4 |
| FY 2007 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2008 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2009 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2010 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY 2011 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| TC Equip- Kits                  |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Total Installment</b>        |                      | 0.0 | 1       | 0.0 |         | 0.0 | 38      | 0.4 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 | 39    | 0.4 |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 0.1 |         | 2.8 |         | 0.4 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 3.3 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Universal Fire Control System (UFCS) [MOD 8] 1-05-02-0568

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

The Universal Fire Control System (UFCS) is a phased upgrade to the existing Improved Fire Control System (IFCS), which is the fire control system of the M142 HIMARS Launcher. The purpose of the first phase of the upgrade is to mitigate technological obsolescence caused by the obsolete Power Personal Computer (PPC2) based executive processors and the obsolete 10Base2 based system bus by replacing them with modern Commercial-off-the-Shelf (COTS) based components. This first phase will decrease procurement/sustainment costs by consolidating processing functionality (fewer processors) and by removing duplicative and costly MIL-STD-1553 interfaces. The second phase of the upgrade will reduce the number of Line Replaceable Units (LRU) within the system. The second phase will remove the Tactical Processing Unit (TPU) and Mass Storage Unit (MSU) from the configuration. This change will reduce procurement/sustainment costs. The third phase will add situational awareness and battle command capability required for the unit of action network. These changes will facilitate future upgrades for the Future Combat Systems (FCS) spirals and will further reduce future modernization/sustainment costs.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

A best technical approach was determined in 4QFY04 and the development of this change was initiated immediately. The incorporation of the first phase of the effort into the contractor's Product Definition Data Package (PDDP) and production contracts is expected to be in 1QFY06. The second phase is expected to be incorporated in 1QFY07. Procurement of the phase three program is planned for FY12.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |    | FY 2009 |   |   |   |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|----|---------|---|---|---|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4  | 1       | 2 | 3 | 4 |
| Totals  |         |   |   |   |         |   |   |   |         |   |   |   | 6       | 5 | 5 | 5  | 3       |   |   |   |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |    |         |   |   |   |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   | 19 | 2       |   | 3 |   |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |    |    | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|----|----|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3  | 4  |             |        |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   | 9       | 9 | 10 | 10 | 206         | 268    |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   | 9       | 9 | 10 | 10 | 216         | 268    |

|                           |         |                          |          |                      |          |
|---------------------------|---------|--------------------------|----------|----------------------|----------|
| METHOD OF IMPLEMENTATION: | Depot   | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 9 Months |
| Contract Dates:           | FY 2006 | FY 2007                  | Jan 07   | FY 2008              | Jan 08   |
| Delivery Date:            | FY 2006 | FY 2007                  | Oct 07   | FY 2008              | Oct 08   |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Universal Fire Control System (UFCS) [MOD 8] 1-05-02-0568

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |      | TOTAL |      |
|---------------------------------|----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|------|-------|------|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$   | Qty   | \$   |
|                                 | <b>RDT&amp;E</b>     |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| <b>Procurement</b>              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Kit Quantity                    |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Installation Kits               |                      |     |         |     |         |     | 24      | 2.2 |         |     |         |     |         |     |         |     |     |      | 24    | 2.2  |
| Installation Kits, Nonrecurring |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Equipment                       |                      |     |         |     |         |     | 21      | 5.0 | 3       | 0.7 |         |     |         |     |         |     | 244 | 45.9 | 268   | 51.6 |
| Equipment, Nonrecurring         |                      |     |         |     | 19      | 2.7 |         |     |         |     |         |     |         |     |         |     |     |      | 19    | 2.7  |
| Engineering Change Orders       |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Data                            |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Training Equipment              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Support Equipment               |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Other                           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| Interim Contractor Support      |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| <b>Installation of Hardware</b> |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| FY 2004 & Prior Equip -- Kits   |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| FY 2005 -- Kits                 |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| FY 2006 Equip -- Kits           |                      |     |         |     |         |     |         |     | 21      | 0.2 |         |     |         |     |         |     |     |      | 21    | 0.2  |
| FY 2007 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| FY 2008 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     | 3       | 0.0 |         |     |         |     |     |      | 3     |      |
| FY 2009 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| FY 2010 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| FY 2011 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |      |       |      |
| TC Equip- Kits                  |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     | 244 | 2.3  | 244   | 2.3  |
| <b>Total Installment</b>        |                      | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 | 21      | 0.2 | 3       | 0.0 |         | 0.0 |         | 0.0 | 244 | 2.3  | 268   | 2.5  |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 0.0 |         | 2.7 |         | 7.2 |         | 0.9 |         | 0.0 |         | 0.0 |         | 0.0 |     | 48.2 |       | 59.0 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Increased Crew Protection [MOD 9] 1-05-02-0569

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

The HIMARS Increased Crew Protection is a Block II Key Performance Parameter (KKP). The HIMARS vehicle and cab are derivatives of the Family of Medium Tactical Vehicles (FMTV). The FMTV cab and chassis are man-rated to protect the crew only during rocket and missile launch. The program has a mandate to spiral in Block II KKP's as technology becomes available. The crews need for protection from small arms fire, artillery fragmentation, and Improvised Explosive Devices (IEDs) was validated based on the results of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF). This modification provides Headquarters Department of the Army approved Level I protection and meets survivability requirements identified by the User. Subsequent to the HIMARS First Unit Equipped (FUE), it is expected that HIMARS will deploy to OIF/OEF and therefore will require Increased Crew Protection.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

In 1QFY04, FMTV validated the need for a cab with increased crew protection and began resourcing product development. Work directives will be initiated to evaluate products such as the Low Signature Armored Cab (LSAC) and the feasibility of integrating this into the M142 HIMARS system. This developmental effort will require engineering trade-off analyses to determine the best technical approach for ballistic protection needs and the mobility/vehicle weight restrictions. Full development for this program is planned for FY06-FY09. The production cut-in for the FMTV cab is planned for 1QFY08.

Installation Schedule:

| Pr Yr   | FY 2005 |   |   |   | FY 2006 |   |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |    |    |   |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|----|----|---|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2  | 3  | 4 |
| Totals  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   | 10      | 10 | 9  | 9 |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |    |    |   |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |    | 19 | 1 |

  

|         | FY 2010 |    |    |    | FY 2011 |    |   |    | FY 2012 |    |    |    | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|----|----|----|---------|----|---|----|---------|----|----|----|---------|---|---|---|-------------|--------|
|         | 1       | 2  | 3  | 4  | 1       | 2  | 3 | 4  | 1       | 2  | 3  | 4  | 1       | 2 | 3 | 4 |             |        |
| Inputs  | 11      | 11 | 11 | 10 | 10      | 10 | 9 | 9  | 7       | 7  | 7  | 7  |         |   |   |   |             | 147    |
| Outputs | 0       | 19 | 0  | 22 | 0       | 19 | 0 | 11 | 0       | 19 | 19 | 18 |         |   |   |   |             | 147    |

|                           |         |                          |          |                      |          |
|---------------------------|---------|--------------------------|----------|----------------------|----------|
| METHOD OF IMPLEMENTATION: | Depot   | ADMINISTRATIVE LEADTIME: | 3 Months | PRODUCTION LEADTIME: | 9 Months |
| Contract Dates:           | FY 2006 | FY 2007                  |          | FY 2008              | Jan 08   |
| Delivery Date:            | FY 2006 | FY 2007                  |          | FY 2008              | Oct 08   |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Increased Crew Protection [MOD 9] 1-05-02-0569

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |      |
|---------------------------------|----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|------|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$   |
|                                 | <b>RDT&amp;E</b>     |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>Procurement</b>              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Kit Quantity                    |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Installation Kits               |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Installation Kits, Nonrecurring |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Equipment                       |                      |     |         |     |         |     |         |     | 38      | 7.4 | 43      | 8.5 | 38      | 7.7 | 28      | 5.8 |     |     | 147   | 29.4 |
| Equipment, Nonrecurring         |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Engineering Change Orders       |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Data                            |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Training Equipment              |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Support Equipment               |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Other                           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| Interim Contractor Support      |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>Installation of Hardware</b> |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY 2004 & Prior Equip -- Kits   |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY 2005 -- Kits                 |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY 2006 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY 2007 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| FY 2008 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     | 20      | 1.0 | 18      | 0.9 |         |     |     |     | 38    | 1.9  |
| FY 2009 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     | 23      | 1.2 | 20      | 1.1 |     |     | 43    | 2.3  |
| FY 2010 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     | 10      | 0.5 | 56  | 3.0 | 66    | 3.5  |
| FY 2011 Equip -- Kits           |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| TC Equip- Kits                  |                      |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |
| <b>Total Installment</b>        |                      | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 | 20      | 1.0 | 41      | 2.1 | 30      | 1.6 | 56  | 3.0 | 147   | 7.7  |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 7.4 |         | 9.5 |         | 9.8 |         | 7.4 |     | 3.0 |       | 37.1 |

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /3/Modification of missiles

P-1 Item Nomenclature  
HELLFIRE Modifications (C71500)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       |             |         |         | 9.7     |         |         |         |         |         |         |             | 9.7        |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   |             |         |         | 9.7     |         |         |         |         |         |         |             | 9.7        |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  |             |         |         | 9.7     |         |         |         |         |         |         |             | 9.7        |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

Longbow HELLFIRE is a missile system that provides the Army with a fire-and-forget, anti-armor capability for the Apache Longbow (Stryker Force) and future helicopters. The fire-and-forget Longbow HELLFIRE system greatly increases aircraft survivability and dramatically improves target acquisition and engagement capabilities in adverse weather when the battlefield is obscured (smoke, fog, dust), and when the threat is using countermeasures. Evolutionary improvements are required to maintain the current effectiveness of the Longbow HELLFIRE missile against expanding regional power threats. The Longbow HELLFIRE modifications will improve Home-on-Jam (HOJ)/Anti-Jam (AJ) capabilities for the missiles, and refit the rocket motor of the missile. The HOJ/AJ objective is to maintain the Longbow HELLFIRE Missile System's low vulnerability and susceptibility to any battlefield jammer threats. The rocket motor refit will replace the current grain spacer with a "spider" spacer and remove a Safety of Use message restricting HELLFIRE missiles with Hercules motors to War Time Use Only.

**Justification:**

FY 05 will procure HOJ/AJ Longbow Hellfire retrofits and rocket motor Hellfire II refits.

**Exhibit P-40M, Budget Item Justification Sheet**

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /3/Modification of missiles

P-1 Item Nomenclature  
HELLFIRE Modifications (C71500)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

| Description          |                | Fiscal Years |         |         |         |         |         |         |         |     |       |
|----------------------|----------------|--------------|---------|---------|---------|---------|---------|---------|---------|-----|-------|
| OSIP NO.             | Classification | 2004 & PR    | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | TC  | Total |
| Home-on-Jam/Anti-Jam |                |              |         |         |         |         |         |         |         |     |       |
| 0-00-00-0000         | Operational    | 0.0          | 3.6     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0 | 3.6   |
| Rocket Motor Refit   |                |              |         |         |         |         |         |         |         |     |       |
| 0-00-00-0000         | Operational    | 0.0          | 6.1     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0 | 6.1   |
| Totals               |                | 0.0          | 9.7     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0 | 9.7   |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Home-on-Jam/Anti-Jam [MOD 1] 0-00-00-0000

MODELS OF SYSTEM AFFECTED: Longbow HELLFIRE

DESCRIPTION/JUSTIFICATION:

The Home-on-Jam (HOJ) and Anti-Jam (AJ) objectives are to successfully operate the Longbow missile in battlefield conditions where enemy jammers are located. National Ground Intelligence Center (NGIC) defined the enemy jammer characteristics and placed them in the Longbow Performance Base Specifications (PBS). These enemy jammers try to protect their tanks and other battlefield assets by jamming the Longbow seeker guidance, thus preventing a direct hit by the Longbow missile.

The HOJ/AJ Longbow missile will first try to track the target that was handed over by the Apache AH-64D. Although the enemy jammer attempts to jam the Longbow seeker guidance, the anti-jam part of this software provides significant improvement to Longbow guidance and "burns" through (rejects) the jamming signals. In the event the enemy jamming overcomes the ability of Longbow to anti-jam, then Longbow switches to a Home-on-Jam mode and guides toward the jamming source. In either case, the Longbow successfully defeats the original intended target or the jamming source.

This funding is to retrofit the entire inventory of Longbow HELLFIRE missiles with a new version of software. This new HOJ/AJ software contains 25 percent additional code over the current production baseline. No hardware modifications are necessary.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

| Pr Yr   | FY 2005 |     |     |     | FY 2006 |     |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |   |   |   |   |  |
|---------|---------|-----|-----|-----|---------|-----|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---|--|
|         | Totals  | 1   | 2   | 3   | 4       | 1   | 2 | 3 | 4       | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4       | 1 | 2 | 3 | 4 |  |
| Inputs  | 0       | 844 | 844 | 844 | 843     |     |   |   |         |   |   |   |         |   |   |   |         |   |   |   |   |  |
| Outputs | 0       | 281 | 844 | 844 | 844     | 562 |   |   |         |   |   |   |         |   |   |   |         |   |   |   |   |  |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |  |  |  |      |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|--|--|--|------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |  |  |  |      |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 3375 |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             |        |  |  |  | 3375 |

METHOD OF IMPLEMENTATION: ADMINISTRATIVE LEADTIME: 1 Months PRODUCTION LEADTIME: 2 Months

Contract Dates: FY 2006 FY 2007 FY 2008

Delivery Date: FY 2006 FY 2007 FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Home-on-Jam/Anti-Jam [MOD 1] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004<br>and Prior |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |      |      |     |
|---------------------------------|----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|------|------|-----|
|                                 | Qty                  | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty     | \$  | Qty | \$  | Qty   | \$   |      |     |
|                                 | <b>RDT&amp;E</b>     | 0   |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| <b>Procurement</b>              | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Kit Quantity                    | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Installation Kits               | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Installation Kits, Nonrecurring | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Equipment                       | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Equipment, Nonrecurring         | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Engineering Change Orders       | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Data                            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Training Equipment              | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Support Equipment               | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Other                           | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| Interim Contractor Support      | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| <b>Installation of Hardware</b> | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2002 & Prior Equip -- Kits    | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2003 Equip -- Kits            | 0                    |     | 3375    | 3.6 |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       | 3375 | 3.6  |     |
| FY2004 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2005 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2006 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2007 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2008 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| FY2009 Equip -- Kits            | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| TC Equip- Kits                  | 0                    |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |      |      |     |
| <b>Total Installment</b>        | 0                    | 0.0 | 3375    | 3.6 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 0.0  | 3375 | 3.6 |
| <b>Total Procurement Cost</b>   |                      | 0.0 |         | 3.6 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 0.0  |      | 3.6 |

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE: Rocket Motor Refit [MOD 2] 0-00-00-0000

MODELS OF SYSTEM AFFECTED:

DESCRIPTION/JUSTIFICATION:

During HELLFIRE live fire training in October 2000, Apache aircraft were damaged by missile motor debris. The "grain spacer" remains in the Hercules rocket motor are ejected at motor ignition and there is the potential for damage to the aircraft tail rotors/system. This resulted in a safety of use message restricting HELLFIRE missiles with Hercules motors to War Time Use Only. The rocket motor refit process will remove the foam rubber grain spacer and replace it with a modified "spider" spacer so that the missile will meet all performance requirements and will not eject grain spacer particles.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

Installation Schedule:

| Pr Yr   | FY 2005 |     |     |     | FY 2006 |     |   |   | FY 2007 |   |   |   | FY 2008 |   |   |   | FY 2009 |   |   |   |
|---------|---------|-----|-----|-----|---------|-----|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|         | 1       | 2   | 3   | 4   | 1       | 2   | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |
| Totals  |         |     |     |     |         |     |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Inputs  | 0       | 354 | 354 | 354 | 351     |     |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| Outputs | 0       | 118 | 354 | 354 | 354     | 233 |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

  

|         | FY 2010 |   |   |   | FY 2011 |   |   |   | FY 2012 |   |   |   | FY 2013 |   |   |   | To Complete | Totals |
|---------|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|-------------|--------|
|         | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 | 1       | 2 | 3 | 4 |             |        |
| Inputs  |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 1413   |
| Outputs |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |             | 1413   |

METHOD OF IMPLEMENTATION:

Contract Dates:

FY 2006

ADMINISTRATIVE LEADTIME:

1 Months

PRODUCTION LEADTIME:

2 Months

Delivery Date:

FY 2006

FY 2007

FY 2008

**INDIVIDUAL MODIFICATION**

Date: February 2005

MODIFICATION TITLE (Cont): Rocket Motor Refit [MOD 2] 0-00-00-0000

FINANCIAL PLAN: (\$ in Millions)

|                                 | FY 2004   |     | FY 2005 |     | FY 2006 |     | FY 2007 |     | FY 2008 |     | FY 2009 |     | FY 2010 |     | FY 2011 |     | TC  |     | TOTAL |     |
|---------------------------------|-----------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|-----|-----|-------|-----|
|                                 | and Prior |     | Qty     | \$  | Qty | \$  | Qty   | \$  |
|                                 | Qty       | \$  |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>RDT&amp;E</b>                | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Procurement</b>              | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Kit Quantity                    | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits               | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Installation Kits, Nonrecurring | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Equipment                       | 0         |     | 1413    | 6.1 |         |     |         |     |         |     |         |     |         |     |         |     |     |     | 1413  | 6.1 |
| Equipment, Nonrecurring         | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Engineering Change Orders       | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Data                            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Training Equipment              | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Support Equipment               | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Other                           | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| Interim Contractor Support      | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Installation of Hardware</b> | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2002 & Prior Equip -- Kits    | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2003 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2004 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2005 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2006 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2007 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2008 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| FY2009 Equip -- Kits            | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| TC Equip- Kits                  | 0         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |     |     |       |     |
| <b>Total Installment</b>        | 0         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 0.0 |
| <b>Total Procurement Cost</b>   |           | 0.0 |         | 6.1 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |         | 0.0 |     | 0.0 |       | 6.1 |

# Exhibit P-40, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /4/Spares and repair parts

P-1 Item Nomenclature  
SPARES AND REPAIR PARTS (CA0250)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 377.9       | 51.6    | 49.3    | 33.6    | 30.1    | 25.2    | 32.4    | 32.8    | 35.5    | 18.3    | 258.8       | 945.7      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 377.9       | 51.6    | 49.3    | 33.6    | 30.1    | 25.2    | 32.4    | 32.8    | 35.5    | 18.3    | 258.8       | 945.7      |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 377.9       | 51.6    | 49.3    | 33.6    | 30.1    | 25.2    | 32.4    | 32.8    | 35.5    | 18.3    | 258.8       | 945.7      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

Provides for the procurement of spares to support initial fielding of new or modified end items.

**Justification:**

The funds in this account procure depot level reparable (DLR) secondary items from the Supply Management, Army activity of the Army Working Capital Fund. To provide initial support, funds are normally required in the same year that end items are fielded. FY 06/07 funds will procure Javelin, Patriot Mods, MLRS Mods, and HIMARS/HIMARS Mods initial spares.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

|   |   |
|---|---|
| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /5/Support equipment and facilities | P-1 Item Nomenclature<br>AIR DEFENSE TARGETS (C93000) |
|---|---|

|                                    |       |                                 |
|------------------------------------|-------|---------------------------------|
| Program Elements for Code B Items: | Code: | Other Related Program Elements: |
|------------------------------------|-------|---------------------------------|

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 374.0       | 3.3     | 3.4     | 5.8     | 6.2     | 6.5     | 6.8     | 7.0     | 7.3     | 4.2     |             | 424.6      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 374.0       | 3.3     | 3.4     | 5.8     | 6.2     | 6.5     | 6.8     | 7.0     | 7.3     | 4.2     |             | 424.6      |
| Initial Spares   | 1.3         |         |         |         |         |         |         |         |         |         |             | 1.3        |
| Total Proc Cost  | 375.3       | 3.3     | 3.4     | 5.8     | 6.2     | 6.5     | 6.8     | 7.0     | 7.3     | 4.2     |             | 425.9      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

The Air Defense Targets program provides target vehicles, scoring ancillary equipment, and ground support equipment for worldwide active Army and Reserve Component air defense training. This training consists of Standards In Training Commission (STRAC) required gun system live fire and Precision Gunnery System (PGS) training and scoring.

**Justification:**

FY06/07 funds the Air Defense Artillery Target System and ancillary hardware consisting of scoring devices and ground support equipment in support of gun, aerial tracking, and Precision Gunnery System (PGS) training as well as targets for Missile Live Fire training. These targets support the U.S. Army Avenger, Bradley Stinger Fighting Vehicle (BSFV) and Linebacker systems worldwide. Training requirements are generated by Department of Army Major Field Commands, Training Centers, and Division Level Commands. These field requirements have been reviewed against force restructuring plans and are consistent with the approved training doctrine. These targets are necessary to meet training strategy and standards and are essential to qualify soldiers in support of readiness.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |          | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 5 /<br>Support equipment and facilities |       |          | P-1 Line Item Nomenclature:<br>AIR DEFENSE TARGETS (C93000) |       |          | Weapon System Type: |       |          | Date:<br>February 2005 |       |          |
|---|----------|---|-------|----------|---|-------|----------|---------------------|-------|----------|------------------------|-------|----------|
| <b>MSLS<br/>Cost Elements</b>                     | ID<br>CD | <b>FY 04</b>  |       |          | <b>FY 05</b>  |       |          | <b>FY 06</b>        |       |          | <b>FY 07</b>           |       |          |
|   |          | TotalCost   | Qty   | UnitCost | TotalCost   | Qty   | UnitCost | TotalCost           | Qty   | UnitCost | TotalCost              | Qty   | UnitCost |
|   |          | \$000   | Units | \$000    | \$000   | Units | \$000    | \$000               | Units | \$000    | \$000                  | Units | \$000    |
| <b>HARDWARE</b>                                   |          |   |       |          |   |       |          |                     |       |          |                        |       |          |
| Remotely Piloted Vehicle Target (RPVT)            | A        | 1672  | 394   | 4.244    | 3097  | 704   | 4.399    | 3320                | 730   | 4.548    | 3433                   | 730   | 4.703    |
| Scoring Hardware (Conversion Kits)                | A        | 86  | 135   | 0.637    |   |       |          |                     |       |          |                        |       |          |
| Scoring Hardware (Microdops Sensors)              | A        |   |       |          | 546   | 100   | 5.460    | 562                 | 100   | 5.620    | 579                    | 100   | 5.790    |
| Scoring Hardware (Ground Station)                 | A        | 285   | 4     | 71.250   | 71  | 1     | 71.000   |                     |       |          |                        |       |          |
| Ballistic Aerial Targets (BAT)                    | A        |   |       |          | 579   | 201   | 2.881    | 589                 | 190   | 3.100    | 766                    | 232   | 3.302    |
| Rocket Motors (3 per BAT)                         | A        |   |       |          | 41  | 246   | 0.167    | 95                  | 570   | 0.167    | 116                    | 696   | 0.167    |
| <b>TOTAL HARDWARE COSTS</b>                       |          | <b>2043</b>   |       |          | <b>4334</b>   |       |          | <b>4566</b>         |       |          | <b>4894</b>            |       |          |
| <b>SUPPORT COSTS</b>                              |          |   |       |          |   |       |          |                     |       |          |                        |       |          |
| Program Management Costs                          |          | 1053  |       |          | 1127  |       |          | 1224                |       |          | 1230                   |       |          |
| Logistics Support Costs                           |          | 342   |       |          | 359   |       |          | 366                 |       |          | 378                    |       |          |
| <b>TOTAL SUPPORT COSTS</b>                        |          | <b>1395</b>   |       |          | <b>1486</b>   |       |          | <b>1590</b>         |       |          | <b>1608</b>            |       |          |
| <b>Total</b>                                      |          | <b>3438</b>   |       |          | <b>5820</b>   |       |          | <b>6156</b>         |       |          | <b>6502</b>            |       |          |

## Exhibit P-5a, Budget Procurement History and Planning

Date:  
February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 5 / Support equipment and facilities

Weapon System Type:

P-1 Line Item Nomenclature:  
AIR DEFENSE TARGETS (C93000)

| WBS Cost Elements:                            | Contractor and Location                  | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|---|--|--------------------------|-----------------|------------|------------------------|-----------|--------------|------------------|------------------|----------------|
| <b>Remotely Piloted Vehicle Target (RPVT)</b> |  |                          |                 |            |                        |           |              |                  |                  |                |
| FY 2004                                       | Griffon Aerospace<br>Huntsville, AL      | Option                   | AMCOM           | Mar 04     | May 04                 | 394       | 4            | YES              |                  |                |
| FY 2005                                       | Griffon Aerospace<br>Huntsville, AL      | Option                   | AMCOM           | Dec 04     | Jan 05                 | 704       | 4            | YES              |                  |                |
| FY 2006                                       | Griffon Aerospace<br>Huntsville, AL      | Option                   | AMCOM           | Nov 05     | Jan 06                 | 730       | 5            | YES              |                  |                |
| FY 2007                                       | Griffon Aerospace<br>Huntsville, AL      | Option                   | AMCOM           | Nov 06     | Jan 07                 | 730       | 5            | YES              |                  |                |
| <b>Scoring Hardware (Conversion Kits)</b>     |  |                          |                 |            |                        |           |              |                  |                  |                |
| FY 2004                                       | Meggitt Defense Systems<br>Fullerton, CA | SS/FP/Cost               | AMCOM           | Mar 04     | Nov 04                 | 135       | 1            | YES              |                  |                |
| <b>Scoring Hardware (Microdops Sensors)</b>   |  |                          |                 |            |                        |           |              |                  |                  |                |
| FY 2005                                       | Meggitt Defense Systems<br>Fullerton, CA | SS/FP/Cost               | AMCOM           | Mar 05     | Aug 05                 | 100       | 5            | YES              |                  |                |
| FY 2006                                       | Meggitt Defense Systems<br>Fullerton, CA | Option                   | AMCOM           | Nov 05     | Jun 06                 | 100       | 6            | YES              |                  |                |
| FY 2007                                       | Meggitt Defense Systems<br>Fullerton, CA | Option                   | AMCOM           | Nov 06     | Jun 07                 | 100       | 6            | YES              |                  |                |
| <b>Scoring Hardware (Ground Station)</b>      |  |                          |                 |            |                        |           |              |                  |                  |                |
| FY 2004                                       | Meggitt Defense Systems<br>Fullerton, CA | SS/FP/Cost               | AMCOM           | Mar 04     | Nov 04                 | 4         | 71           | YES              |                  |                |
| FY 2005                                       | Meggitt Defense Systems<br>Fullerton, CA | Option                   | AMCOM           | Mar 05     | Nov 05                 | 1         | 71           | YES              |                  |                |
| <b>Ballistic Aerial Targets (BAT)</b>         |  |                          |                 |            |                        |           |              |                  |                  |                |

REMARKS: Sole Source Justification: Meggitt Defense Systems was the only source that possessed the knowledge and expertise required in order to provide the services and hardware necessary to perform the full range of tasks needed to support U.S. Army target scoring missions.

## Exhibit P-5a, Budget Procurement History and Planning

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army / 5 / Support equipment and facilities

Weapon System Type:

P-1 Line Item Nomenclature:

AIR DEFENSE TARGETS (C93000)

| WBS Cost Elements:               | Contractor and Location                | Contract Method and Type | Location of PCO | Award Date | Date of First Delivery | QTY Units | Unit Cost \$ | Specs Avail Now? | Date Revsn Avail | RFP Issue Date |
|----------------------------------|--|--------------------------|-----------------|------------|------------------------|-----------|--------------|------------------|------------------|----------------|
| FY 2005                          | Coast Metal Craft<br>Compton, CA       | Option                   | AMCOM           | Nov 04     | Jan 05                 | 201       | 3            | YES              |                  |                |
| FY 2006                          | Coast Metal Craft<br>Compton, CA       | Option                   | AMCOM           | Nov 05     | Jan 06                 | 190       | 3            | YES              |                  |                |
| FY 2007                          | Coast Metal Craft<br>Compton, CA       | Option                   | AMCOM           | Nov 06     | Jan 07                 | 232       | 3            | YES              |                  |                |
| <b>Rocket Motors (3 per BAT)</b> |  |                          |                 |            |                        |           |              |                  |                  |                |
| FY 2005                          | Rock Island Arsenal<br>Rock Island, IL | MIPR                     | Rock Island, IL | Feb 05     | Mar 05                 | 246       | 0            | YES              |                  |                |
| FY 2006                          | Rock Island Arsenal<br>Rock Island, IL | MIPR                     | Rock Island, IL | Jan 06     | Mar 06                 | 570       | 0            | YES              |                  |                |
| FY 2007                          | Rock Island Arsenal<br>Rock Island, IL | MIPR                     | Rock Island, IL | Jan 07     | Mar 07                 | 696       | 0            | YES              |                  |                |

REMARKS: Sole Source Justification: Meggitt Defense Systems was the only source that possessed the knowledge and expertise required in order to provide the services and hardware necessary to perform the full range of tasks needed to support U.S. Army target scoring missions.





# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /5/Support equipment and facilities

P-1 Item Nomenclature  
ITEMS LESS THAN \$5.0M (MISSILES) (CL2000)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 40.7        | 0.9     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.2     | 1.2     |             | 44.1       |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 40.7        | 0.9     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.2     | 1.2     |             | 44.1       |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 40.7        | 0.9     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 1.2     | 1.2     |             | 44.1       |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

Provides for the procurement of various tools and shop sets to support the Army's missile systems worldwide.

**Justification:**

Funding will procure tools and shop sets to support the MRLS system.

| <b>Exhibit P-5, Weapon<br/>MSLS Cost Analysis</b> |  | Appropriation/Budget Activity/Serial No.<br>Missile Procurement, Army / 5 /<br>Support equipment and facilities |              |      | P-1 Line Item Nomenclature:<br>ITEMS LESS THAN \$5.0M (MISSILES) (CL2000) |              |      | Weapon System Type: |              |      | Date:<br>February 2005 |              |      |          |
|---|--|---|--------------|------|---|--------------|------|---------------------|--------------|------|------------------------|--------------|------|----------|
| <b>MSLS<br/>Cost Elements</b>                     |  | ID<br>CD  | <b>FY 04</b> |      |   | <b>FY 05</b> |      |                     | <b>FY 06</b> |      |                        | <b>FY 07</b> |      |          |
|   |  |   | TotalCost    | Qty  | UnitCost  | TotalCost    | Qty  | UnitCost            | TotalCost    | Qty  | UnitCost               | TotalCost    | Qty  | UnitCost |
|   |  |   | \$000        | Each | \$000   | \$000        | Each | \$000               | \$000        | Each | \$000                  | \$000        | Each | \$000    |
| <b>MLRS</b>                                       |  |   |              |      |   |              |      |                     |              |      |                        |              |      |          |
| Components  |  |   | 6            |      |   | 6            |      |                     | 6            |      |                        | 6            |      |          |
| Assembly  |  |   | 4            |      |   | 4            |      |                     | 4            |      |                        | 4            |      |          |
| <b>Total</b>                                      |  |   | <b>10</b>    |      |   | <b>10</b>    |      |                     | <b>10</b>    |      |                        | <b>10</b>    |      |          |

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /5/Support equipment and facilities

P-1 Item Nomenclature  
PRODUCTION BASE SUPPORT (CA0100)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

|                  | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
|------------------|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------------|------------|
| Proc Qty         |             |         |         |         |         |         |         |         |         |         |             |            |
| Gross Cost       | 608.8       | 3.3     | 3.4     | 3.4     | 3.5     | 3.9     | 4.0     | 4.1     | 4.4     | 4.6     |             | 643.5      |
| Less PY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Plus CY Adv Proc |             |         |         |         |         |         |         |         |         |         |             |            |
| Net Proc (P-1)   | 608.8       | 3.3     | 3.4     | 3.4     | 3.5     | 3.9     | 4.0     | 4.1     | 4.4     | 4.6     |             | 643.5      |
| Initial Spares   |             |         |         |         |         |         |         |         |         |         |             |            |
| Total Proc Cost  | 608.8       | 3.3     | 3.4     | 3.4     | 3.5     | 3.9     | 4.0     | 4.1     | 4.4     | 4.6     |             | 643.5      |
| Flyaway U/C      |             |         |         |         |         |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C |             |         |         |         |         |         |         |         |         |         |             |            |

**Description:**

This program provides Production Base Support and Equipment Replacement (PSR) of Government-owned equipment used in production and production testing of missile systems or missile components.

**Justification:**

FY 06/07 funds will be used to establish, modernize, expand or replace Army-owned industrial facilities. These funds are essential to sustain the Army's missile warhead production capability, to eliminate safety hazards by replacing worn equipment, and to refurbish facilities.

# Exhibit P-40, Budget Item Justification Sheet

Date: February 2005

| Appropriation/Budget Activity/Serial No:<br>Missile Procurement, Army /5/Support equipment and facilities |             |         |         |         | P-1 Item Nomenclature<br>PIF FOR OTHER (CA4002) |         |         |         |         |         |             |            |
|---|-------------|---------|---------|---------|---|---------|---------|---------|---------|---------|-------------|------------|
| Program Elements for Code B Items:  |             |         |         | Code:   | Other Related Program Elements:                 |         |         |         |         |         |             |            |
|   | Prior Years | FY 2003 | FY 2004 | FY 2005 | FY 2006   | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Prog |
| Proc Qty  |             |         |         |         |   |         |         |         |         |         |             |            |
| Gross Cost  | 310.4       | 3.3     | 3.4     | 3.4     | 3.5   | 3.9     | 4.0     | 4.1     | 4.4     | 4.6     |             | 345.0      |
| Less PY Adv Proc  |             |         |         |         |   |         |         |         |         |         |             |            |
| Plus CY Adv Proc  |             |         |         |         |   |         |         |         |         |         |             |            |
| Net Proc (P-1)  | 310.4       | 3.3     | 3.4     | 3.4     | 3.5   | 3.9     | 4.0     | 4.1     | 4.4     | 4.6     |             | 345.0      |
| Initial Spares  |             |         |         |         |   |         |         |         |         |         |             |            |
| Total Proc Cost   | 310.4       | 3.3     | 3.4     | 3.4     | 3.5   | 3.9     | 4.0     | 4.1     | 4.4     | 4.6     |             | 345.0      |
| Flyaway U/C   |             |         |         |         |   |         |         |         |         |         |             |            |
| Wpn Sys Proc U/C  |             |         |         |         |   |         |         |         |         |         |             |            |

**Description:**

Army Test and Evaluation Command (ATEC): This program provides funding to the ATEC, Developmental Test Command (DTC) to establish, modernize, expand or replace Army-owned industrial facilities used in production testing of missiles and missile components. It sustains Army production test capabilities through upgrade and replacement of instrumentation and equipment that is technologically and/or economically obsolete. Modernization of test instrumentation and equipment generally provides increased automation and efficiencies, improved data quality and quantity and cost avoidances to Army Program Managers. At DTC, funding is required to upgrade or replace production test instrumentation and equipment at Redstone Technical Test Center (RTTC), Huntsville, AL and White Sands Missile Range (WSMR), NM.

Iowa Army Ammunition Plant: This program provides funding for Iowa Army Ammunition Plant's (AAP) continuing modernization of production capability for missile end items.

**Justification:**

ATEC: FY06/07 procures: At RTTC, upgraded robotics and remote control equipment used during rocket motor dissection for mechanical and chemical analysis in support of service life determination, risk mitigation programs, and motor failure analysis; refurbishment of the current auto-tracking antenna used in missile tracking to support low level flight paths as well as high angle air launched systems; a chamber to simulate high altitude atmospheric pressure to ensure missile safety during transport by aviation assets and machines that provide a horizontal load to missiles to simulate anticipated shock environments in the field. At WSMR, remotely controlled instrumentation and site monitoring equipment used in hazardous test areas during missile warhead testing; remote missile assembly/disassembly equipment for evaluating missile components for failure and/or modification; replacement sensors, telemetry equipment, time, space and position instrumentation, radio frequency measurement instruments and data processing equipment used in measuring specific test parameters such as temperature, pressure, noise, and vibration during pre-launch missile monitoring; upgraded environmental conditioning equipment and test chambers used to simulate extreme temperature, humidity, altitude and Microbiological (Fungus) environments; replacement refrigeration systems in fixed and mobile environment conditioning equipment to eliminate ozone depleting chemicals; laboratory equipment to conduct chemical analysis of wastes; metallurgy lab equipment; and replacement of old shock and vibration data collection, analysis, and test equipment (accelerometers, amplifier systems, data lines, pyroshock test equipment, power amplifiers, computers, vibration control systems, electrodynamic shaker systems, shaker upgrade parts, etc) with new, reliable, efficient state of the art test equipment. The majority of the instrumentation being upgraded or replaced is obsolete and has met or exceeded its economic life.

**Exhibit P-40C, Budget Item Justification Sheet**

Date:

February 2005

Appropriation/Budget Activity/Serial No:

Missile Procurement, Army /5/Support equipment and facilities

P-1 Item Nomenclature

PIF FOR OTHER (CA4002)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

This instrumentation is required to ensure complete and accurate test data is collected and safety and environmental hazards are minimized. Benefits of this project include increased test efficiencies and decreased costs and risks to Army Program Managers.

Iowa AAP: The Fiscal Year 2006 effort will replace the existing hydraulic system in the Warhead Pressing Area that was installed over 20 years ago and reached the end of its useful life. The Flash X-Ray Control Panel and Trigger System will be updated and replaced in order to meet current and future needs of the Testing Area. Project includes the first phase of rehabilitating the existing ultraviolet (UV) deluge systems in the Power Inspection Areas of Line 4B Press Line and Line 1A Development Areas in order to avoid the washing of hazardous waste spills outside the operating building. Effort will also replace the control systems for the Line 4B Warhead presses which, if not replaced, will prohibit the use of state-of-the-art technology in producing warheads with the maximum capability and quality.

The Fiscal Year 2007 effort will design, fabricate, and install tooling charges on two 300-ton warhead bullet presses in the Warhead Pressing Development to alleviate the possibility of severe injury to personnel from handling the extremely hot and heavy tooling. It will rehabilitate and install a compressor from Line 800 to Line 1 Development in order to meet the operational need for generating compressed air. Effort will replace roofing material on three Line 1 Development Area Buildings which are well past their normal life expectancy and have required extensive patching, caulking, and flashing. This project will rehabilitate the horizontal test fire facility that supports the Warhead during static horizontal firing, and it will complete the final phase of the Warhead UV Fire Protection Rehabilitation Project.

**Exhibit P-40C, Budget Item Justification Sheet**

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /5/Support equipment and facilities

P-1 Item Nomenclature

PIF FOR OTHER (CA4002)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

Benefits of this project include increased test efficiencies and decreased costs and risks to Army Program Managers.

U.S. Army Test and Evaluation Command (ATEC): Fiscal Year 2006/2007 projects are required to support testing of production missile systems and components. This test instrumentation is used to collect and analyze data on missile safety, reliability and performance.

Iowa AAP: The Fiscal Year (FY) 2006 and FY2007 projects are required in order to provide continued support in the production capability for missile end items.

PIF FOR OTHER (MISSILE APPROPRIATION - CA4002) (\$M)

| LOCATION   | PROJECT | FY04         | FY05         | FY06         | FY07         |
|--|---------|--------------|--------------|--------------|--------------|
| Redstone Tech Test Center, Huntsville, AL; White Sands Missile Range, NM | ATEC    | 1.664        | 1.682        | 1.598        | 1.968        |
| Iowa AAP, Middletown, IA   | 6XX5333 | 1.732        | 1.764        | 1.883        | 1.945        |
| <b>TOTAL</b>   |         | <b>3.396</b> | <b>3.446</b> | <b>3.481</b> | <b>3.913</b> |

# Exhibit P-40C, Budget Item Justification Sheet

Date:

February 2005

Appropriation/Budget Activity/Serial No:  
Missile Procurement, Army /5/Support equipment and facilities

P-1 Item Nomenclature

PIF FOR OTHER (CA4002)

Program Elements for Code B Items:

Code:

Other Related Program Elements:

| <u>Location</u>            | <u>Project Title</u>                     | <u>Project</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> |
|----------------------------|--|----------------|----------------|----------------|----------------|----------------|
| <u>Production Support</u>  |  |                |                |                |                |                |
| Iowa Army Ammunition Plant | Production Support Equipment Replacement | 6XX5333        | 1732           | 1764           | 1883           | 1945           |
|                            | <b>Subtotal - Production</b>             |                | <b>1,732</b>   | <b>1,764</b>   | <b>1,883</b>   | <b>1,945</b>   |
| <u>Environmental</u>       |  |                |                |                |                |                |
|                            | <b>Subtotal - Environmental</b>          |                | <b>0</b>       | <b>0</b>       | <b>0</b>       | <b>0</b>       |
|                            | <b>Total Industrial Facilities</b>       |                | <b>1,732</b>   | <b>1,764</b>   | <b>1,883</b>   | <b>1,945</b>   |

**Exhibit P-25 Industrial Facilities Cost Analysis (Dollars in Thousands)**

1. Date: February 2005

|   |   |  |  |
|---|---|--|--|
| 2. Project Title/Type<br>Production Support Equipment Replacement |   | 3. End Item Supported Model<br>Missile Warheads    |  |
| 4. Project Number<br>6XX5333                                      | 5. Annual Capacity Before (1-8-5)<br>Not Applicable | 6. Annual Capacity After (1-8-5)<br>Not Applicable |  |

| Element of Cost   | FY 04       | FY 05       | FY 06       | FY 07       | H. Facility   |       |           |                |        |            |            |
|---|-------------|-------------|-------------|-------------|---|-------|-----------|----------------|--------|------------|------------|
| <b>A. Construction Cost</b>   | 1082        | 489         |             | 764         | 1. Name <u>Iowa Army Ammunition Plant</u>           |       |           |                |        |            |            |
|   |             |             |             |             | 2. Location <u>Middletown, Iowa</u>                 |       |           |                |        |            |            |
| <b>B. Equipment Costs</b> (Individual equipment cost should be specified for all equipment costing more than \$0.5 Million) | 537         | 907         | 1677        | 861         | 3. Type (GOGO, GOCO, COCO) <u>GOCO</u>              |       |           |                |        |            |            |
|   |             |             |             |             | <b>I. Related Projects</b>                          |       |           |                |        |            |            |
| 1.  |             |             |             |             | Project Number                                      | Title | FY & Appn | Value (\$ Mil) | Facing | Start Date | Compl Date |
| 2.  |             |             |             |             |   |       |           |                |        |            |            |
| 3.  |             |             |             |             |   |       |           |                |        |            |            |
| <b>Subtotal Equipment Cost</b>  | <b>537</b>  | <b>907</b>  | <b>1677</b> | <b>861</b>  | <b>J. Principal Milestones</b>                      |       |           |                |        |            |            |
| <b>C. Equipment Installation Cost</b>   | 19          | 184         | 191         | 261         | 1. Concept Design Complete <u>Not Applicable</u>    |       |           |                |        |            |            |
| <b>D. Contractor Support Cost</b>   | 27          | 11          | 15          | 59          | 2. Final Design Complete <u>Not Applicable</u>      |       |           |                |        |            |            |
| <b>E. Corps of Engineers Support Cost</b>   | 67          | 30          |             |             | 3. Initial/Final Project Award <u>Mar 06/Jun 07</u> |       |           |                |        |            |            |
| <b>F. Other In-houses Support Costs</b>   |             | 143         |             |             | 4. Construction Complete <u>Dec 07</u>              |       |           |                |        |            |            |
| <b>Total Facility Project Cost</b>  | <b>1732</b> | <b>1764</b> | <b>1883</b> | <b>1945</b> | 5. Equipment Installation Complete <u>Mar 08</u>    |       |           |                |        |            |            |
| <b>G. Other Costs</b>   |             |             |             |             | 6. Prove Out Begins <u>Not Applicable</u>           |       |           |                |        |            |            |
| 1. Facility Prove-out Cost  |             |             |             |             | 7. Prove Out Complete <u>Not Applicable</u>         |       |           |                |        |            |            |
| 2. Military Construction Appn.  |             |             |             |             |   |       |           |                |        |            |            |

**Narrative Explanation**

This Fiscal Year 2006 effort will replace the existing hydraulic system in the Warhead Pressing Area that was installed over 20 years ago and reached the end of its useful life. The Flash X-Ray Control Panel and Trigger System will be updated and replaced in order to meet current and future needs of the Testing Area. Project includes the first phase of rehabilitating the existing ultraviolet (UV) deluge systems in the Power Inspection Areas of Line 4B Press Line and Line 1A Development Areas in order to avoid the washing of hazardous waste spills outside the operating building. Effort will also replace the control systems for the Line 4B Warhead presses which, if not replaced, will prohibit the use of state-of-the-art technology in producing warheads with the maximum capability and quality.

This Fiscal Year 2007 effort will design, fabricate, and install tooling charges on two 300-ton warhead bullet presses in the Warhead Pressing Development to alleviate the possibility of severe injury to personnel from handling the extremely hot and heavy tooling. It will rehabilitate and install a compressor from Line 800 to Line 1 Development in order to meet the operational need for generating compressed air. Effort will replace roofing material on three Line 1 Development Area Buildings which are well past their normal life expectancy and have required extensive patching, caulking, and flashing. This project will rehabilitate the horizontal test fire facility that supports the Warhead during static horizontal firing, and it will complete the final phase of the Warhead UV Fire Protection Rehabilitation Project.