

# UNCLASSIFIED

CLASSIFICATION:

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |                                              |         |               |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|----------------------------------------------|---------|---------------|---------|
| EXHIBIT R-2, RDT&E Budget Item Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |         |         |         |                                              |         | DATE:         |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |                                              |         | February 2003 |         |
| APPROPRIATION/BUDGET ACTIVITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |         |         |         | R-1 ITEM NOMENCLATURE                        |         |               |         |
| RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |         |         |         | 0604727N Joint Standoff Weapon System (JSOW) |         |               |         |
| COST (\$ in Millions)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006                                      | FY 2007 | FY 2008       | FY 2009 |
| Total PE Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 30.282  | 16.283  | 0.775   | 0.526   | 0.388                                        | 0.339   | 0.346         | 0.351   |
| A2068 Joint Standoff Weapon (JSOW)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 30.282  | 16.283  | 0.775   | 0.526   | 0.388                                        | 0.339   | 0.346         | 0.351   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |                                              |         |               |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |                                              |         |               |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |                                              |         |               |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |         |         |         |                                              |         |               |         |
| (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |         |         |         |                                              |         |               |         |
| The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |         |         |         |                                              |         |               |         |
| The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B submunition payload. This weapon is designed up front for pre-planned product improvements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |         |         |         |                                              |         |               |         |
| The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 was deferred, however the Navy will conduct IOT&E in FY 2003 to verify operational effectiveness and suitability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |         |         |         |                                              |         |               |         |
| The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomus Target Acquisition (ATA) capability, and a unitary warhead to enable the attack of blast/fragmentation targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. The Unitary Systems Development and Demonstration (SD&D) program develops the terminal seeker and ATA capbilty, and integrates these with a 500 lb class "Unitary" warhead, the British Royal Augmentation Charge (BROACH) Multiple Warhead System (MWS). The BROACH MWS provides blast/fragmentation effects as well as enhanced penetration capability against hard point targets. BROACH MWS development and integration risk is reduced significantly by the on going BROACH developmental efforts of the United Kingdom Storm Shadow Program, the JSOW Foreign Warhead Comparative Testing previously conducted, and the early provisioning for BROACH in the JSOW Unitary Roadmap. Unitary variant Operational Evaluation (OPEVAL) and Low Rate Initial Production is planned for FY 2003, with Full Rate Production beginning in FY 2004. |         |         |         |         |                                              |         |               |         |
| JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces and weight and dimension considerations, JSOW will be compatible with Air Force and NATO aircraft.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |         |         |         |                                              |         |               |         |
| (U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it emcompasses development and demonstration of new end-items prior to production approval decision.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |         |         |         |                                              |         |               |         |

R-1 SHOPPING LIST - Item No.

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Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 1 of 9)

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## CLASSIFICATION:

|                                                             |                                                                                 |         |         |         |                                                                      |         |                               |         |
|-------------------------------------------------------------|---------------------------------------------------------------------------------|---------|---------|---------|----------------------------------------------------------------------|---------|-------------------------------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |                                                                                 |         |         |         |                                                                      |         | DATE:<br><b>February 2003</b> |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROGRAM ELEMENT NUMBER AND NAME<br>0604727N Joint Standoff Weapon System (JSOW) |         |         |         | PROJECT NUMBER AND NAME<br>A2068 Joint Standoff Weapon System (JSOW) |         |                               |         |
| COST (\$ in Millions)                                       | FY 2002                                                                         | FY 2003 | FY 2004 | FY 2005 | FY 2006                                                              | FY 2007 | FY 2008                       | FY 2009 |
| Project Cost                                                | 30.282                                                                          | 16.283  | 0.775   | 0.526   | 0.388                                                                | 0.339   | 0.346                         | 0.351   |
| RDT&E Articles Qty                                          | 19                                                                              |         |         |         |                                                                      |         |                               |         |

### (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B submunition payload. This weapon is designed up front for pre-planned product improvements. The JSOW-BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. The JSOW/BLU-108 variant was deferred in the POM-04 budget. However, JSOW-B FY 03 DT/OT funding will still be required to verify the AUR ECP fix during operational test using JSOW-A weapons. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomus Target Acquisition (ATA) capability, and a unitary warhead to enable the attack of blast/fragmentation targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. The Unitary Systems Development and Demonstration (SD&D) phase of the program concludes with the completion of Operational Evaluation (OPEVAL). A Low Rate Initial Production Contract Award is planned for FY-03. Through adherence to international standards for weapons interfaces and weight and dimension considerations, JSOW will be compatible with Air Force and NATO aircraft. JSOW is a joint Navy/Air Force program.

The Unitary SD&D program phase incorporates a 500 lb class "Unitary" warhead that includes the integration of the Broach Multiple Warhead System (MWS) into the JSOW AGM-154C variant. This is an FY 01 Congressionally approved New Start effort. The Broach MWS provides blast/fragmentation effects as well as enhanced penetration capability against hard point targets. The Broach MWS development and integration risk is reduced significantly by the on going Broach developmental efforts of the United Kingdom Storm Shadow Program, the JSOW Foreign Warhead Comparative Testing previously conducted, and the early provisioning for Broach in the JSOW Unitary Roadmap.

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| EXHIBIT R-2a, RDT&E Project Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                 |                                                               | DATE:<br><b>February 2003</b> |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------|-------|--|-------|-------|-------|-------|--------------------------------------|--------|--------|-------|-------|-------------------------|----|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | PROGRAM ELEMENT NUMBER AND NAME<br>0604727N Joint Standoff Weapon System (JSOW) | PROJECT NUMBER AND NAME<br>A2068 Joint Standoff Weapon (JSOW) |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| <b>(U) B. Accomplishments/Planned Program</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                 |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: right;">30.282</td><td style="text-align: right;">15.083</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.000</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td style="text-align: right;">19</td><td></td><td></td><td></td></tr></tbody></table> |                                                                                 |                                                               |                               |       |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 30.282 | 15.083 | 0.000 | 0.000 | RDT&E Articles Quantity | 19 |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | FY 02                                                                           | FY 03                                                         | FY 04                         | FY 05 |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| Accomplishments/Effort/Subtotal Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 30.282                                                                          | 15.083                                                        | 0.000                         | 0.000 |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| RDT&E Articles Quantity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 19                                                                              |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Perform Unitary SD&amp;D efforts, configuration audits and environmental testing and perform Broach insertion<br/>Perform Unitary Broach warhead and fuzing development<br/>Perform Unitary combined Development Testing and Operational Testing (DT/OT) on Seeker and Broach warhead<br/>Perform Unitary system engineering technical support; complete insensitive munitions qualifications and safety approvals</div>                                                                                                                                   |                                                                                 |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: right;">0.000</td><td style="text-align: right;">0.200</td><td style="text-align: right;">0.775</td><td style="text-align: right;">0.526</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>                                |                                                                                 |                                                               |                               |       |  | FY 02 | FY 03 | FY 04 | FY 05 | Accomplishments/Effort/Subtotal Cost | 0.000  | 0.200  | 0.775 | 0.526 | RDT&E Articles Quantity |    |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | FY 02                                                                           | FY 03                                                         | FY 04                         | FY 05 |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| Accomplishments/Effort/Subtotal Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.000                                                                           | 0.200                                                         | 0.775                         | 0.526 |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| RDT&E Articles Quantity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Perform Baseline JMPS Migration; plan new functions into JSOW Common Unique Planning Component (CUPC) and develop new software releases of CUPC.</div>                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                 |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | FY 02                                                                           | FY 03                                                         | FY 04                         | FY 05 |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| Accomplishments/Effort/Subtotal Cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                 | 1.000                                                         | 0.000                         | 0.000 |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| RDT&E Articles Quantity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                 |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |
| <div style="border: 1px solid black; padding: 5px; min-height: 60px;">Conduct AGM-154B Initial Operational Test and Evaluation (IOT&amp;E).</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                 |                                                               |                               |       |  |       |       |       |       |                                      |        |        |       |       |                         |    |  |  |  |

R-1 SHOPPING LIST - Item No.

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Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 3 of 9)

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## CLASSIFICATION:

| EXHIBIT R-2a, RDT&E Project Justification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                          |                                                               | DATE: <b>February 2003</b> |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------|---------|--|---------|---------|---------|---------|--------------|--|--|--|--|-----------------------------|--------|--------|-------|-------|--------------------------------|--------|--------|-------|-------|-------------------|-------|--------|--------|--------|------------------------|--|--|--|--|----------------------------------|--|--|--|--|----------------------------------------|--|--------|--|--|---------------------------|--------|--|--|--|--------------------|--|--|--|--|----------------------|--------|--------|--------|--------|----------------|-------|--|--|--|----------------------------|--|--|--------|--------|-------------------------|--|--|--|--|----------|-------|--------|--------|--------|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDTE, N / BA-5</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | PROGRAM ELEMENT NUMBER AND NAME<br>0604727N Joint Standoff Weapon (JSOW) | PROJECT NUMBER AND NAME<br>A2068 Joint Standoff Weapon (JSOW) |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| <p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 35%;"></th> <th style="text-align: right; width: 15%;">FY 2002</th> <th style="text-align: right; width: 15%;">FY 2003</th> <th style="text-align: right; width: 15%;">FY 2004</th> <th style="text-align: right; width: 15%;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>(U) Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget</td> <td style="text-align: right;">26.615</td> <td style="text-align: right;">16.652</td> <td style="text-align: right;">0.796</td> <td style="text-align: right;">0.596</td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">30.282</td> <td style="text-align: right;">16.283</td> <td style="text-align: right;">0.775</td> <td style="text-align: right;">0.526</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">3.667</td> <td style="text-align: right; border-top: 1px solid black;">-0.369</td> <td style="text-align: right; border-top: 1px solid black;">-0.021</td> <td style="text-align: right; border-top: 1px solid black;">-0.070</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional program reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.099</td> <td></td> <td></td> </tr> <tr> <td>    Congressional rescissions</td> <td style="text-align: right;">-0.057</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td style="text-align: right;">-0.083</td> <td style="text-align: right;">-0.270</td> <td style="text-align: right;">-0.018</td> <td style="text-align: right;">-0.011</td> </tr> <tr> <td>    Reprogrammings</td> <td style="text-align: right;">3.807</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Other Navy/OSD Adjustments</td> <td></td> <td></td> <td style="text-align: right;">-0.003</td> <td style="text-align: right;">-0.059</td> </tr> <tr> <td>    Congressional increases</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">3.667</td> <td style="text-align: right; border-top: 1px solid black;">-0.369</td> <td style="text-align: right; border-top: 1px solid black;">-0.021</td> <td style="text-align: right; border-top: 1px solid black;">-0.070</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Not Applicable</p> <p>(U) Technical: Not Applicable</p> |                                                                          |                                                               |                            |         |  | FY 2002 | FY 2003 | FY 2004 | FY 2005 | (U) Funding: |  |  |  |  | Previous President's Budget | 26.615 | 16.652 | 0.796 | 0.596 | Current BES/President's Budget | 30.282 | 16.283 | 0.775 | 0.526 | Total Adjustments | 3.667 | -0.369 | -0.021 | -0.070 | Summary of Adjustments |  |  |  |  | Congressional program reductions |  |  |  |  | Congressional undistributed reductions |  | -0.099 |  |  | Congressional rescissions | -0.057 |  |  |  | SBIR/STTR Transfer |  |  |  |  | Economic Assumptions | -0.083 | -0.270 | -0.018 | -0.011 | Reprogrammings | 3.807 |  |  |  | Other Navy/OSD Adjustments |  |  | -0.003 | -0.059 | Congressional increases |  |  |  |  | Subtotal | 3.667 | -0.369 | -0.021 | -0.070 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | FY 2002                                                                  | FY 2003                                                       | FY 2004                    | FY 2005 |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| (U) Funding:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                          |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Previous President's Budget                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 26.615                                                                   | 16.652                                                        | 0.796                      | 0.596   |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Current BES/President's Budget                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 30.282                                                                   | 16.283                                                        | 0.775                      | 0.526   |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Total Adjustments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.667                                                                    | -0.369                                                        | -0.021                     | -0.070  |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Summary of Adjustments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                          |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Congressional program reductions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                          |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Congressional undistributed reductions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                          | -0.099                                                        |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Congressional rescissions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -0.057                                                                   |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| SBIR/STTR Transfer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                          |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Economic Assumptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -0.083                                                                   | -0.270                                                        | -0.018                     | -0.011  |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Reprogrammings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3.807                                                                    |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Other Navy/OSD Adjustments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                          |                                                               | -0.003                     | -0.059  |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Congressional increases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                          |                                                               |                            |         |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |
| Subtotal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3.667                                                                    | -0.369                                                        | -0.021                     | -0.070  |  |         |         |         |         |              |  |  |  |  |                             |        |        |       |       |                                |        |        |       |       |                   |       |        |        |        |                        |  |  |  |  |                                  |  |  |  |  |                                        |  |        |  |  |                           |        |  |  |  |                    |  |  |  |  |                      |        |        |        |        |                |       |  |  |  |                            |  |  |        |        |                         |  |  |  |  |          |       |        |        |        |

R-1 SHOPPING LIST - Item No. 130

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## CLASSIFICATION:

|                                                             |  |  |                                                                          |  |  |                                                               |  |                            |  |
|-------------------------------------------------------------|--|--|--------------------------------------------------------------------------|--|--|---------------------------------------------------------------|--|----------------------------|--|
| EXHIBIT R-2a, RDT&E Project Justification                   |  |  |                                                                          |  |  |                                                               |  | DATE: <b>February 2003</b> |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |  |  | PROGRAM ELEMENT NUMBER AND NAME<br>0604727N Joint Standoff Weapon (JSOW) |  |  | PROJECT NUMBER AND NAME<br>A2068 Joint Standoff Weapon (JSOW) |  |                            |  |

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

| <u>Line Item No. &amp; Name</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>To Complete</u> | <u>Total Cost</u> |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|-------------------|
| USN WP, N; BLI: 223000 JSOW     |                |                |                |                |                |                |                |                |                    |                   |
| \$S                             | 0.000          | 101.262        | 138.451        | 137.147        | 144.015        | 126.226        | 128.217        | 130.174        | 179.201            | 1084.693          |
| Qtys                            | 0              | 165            | 429            | 463            | 490            | 404            | 387            | 405            | 8011               |                   |
| USAF WP,F; BLI: 27324* JSOW     |                |                |                |                |                |                |                |                |                    |                   |
| \$S                             | 10.206         | 12.208         | 79.017         | 83.440         | 84.293         | 88.302         | 70.411         | 71.740         | 156.311            | 655.928           |
| Qtys                            | 0              | 18             | 335            | 363            | 375            | 380            | 299            | 301            | 735                |                   |

**(U) E. ACQUISITION STRATEGY:**

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts were used for the SD&D program effort. Fixed price type contracts will be used for production.

R-1 SHOPPING LIST - Item No. 130

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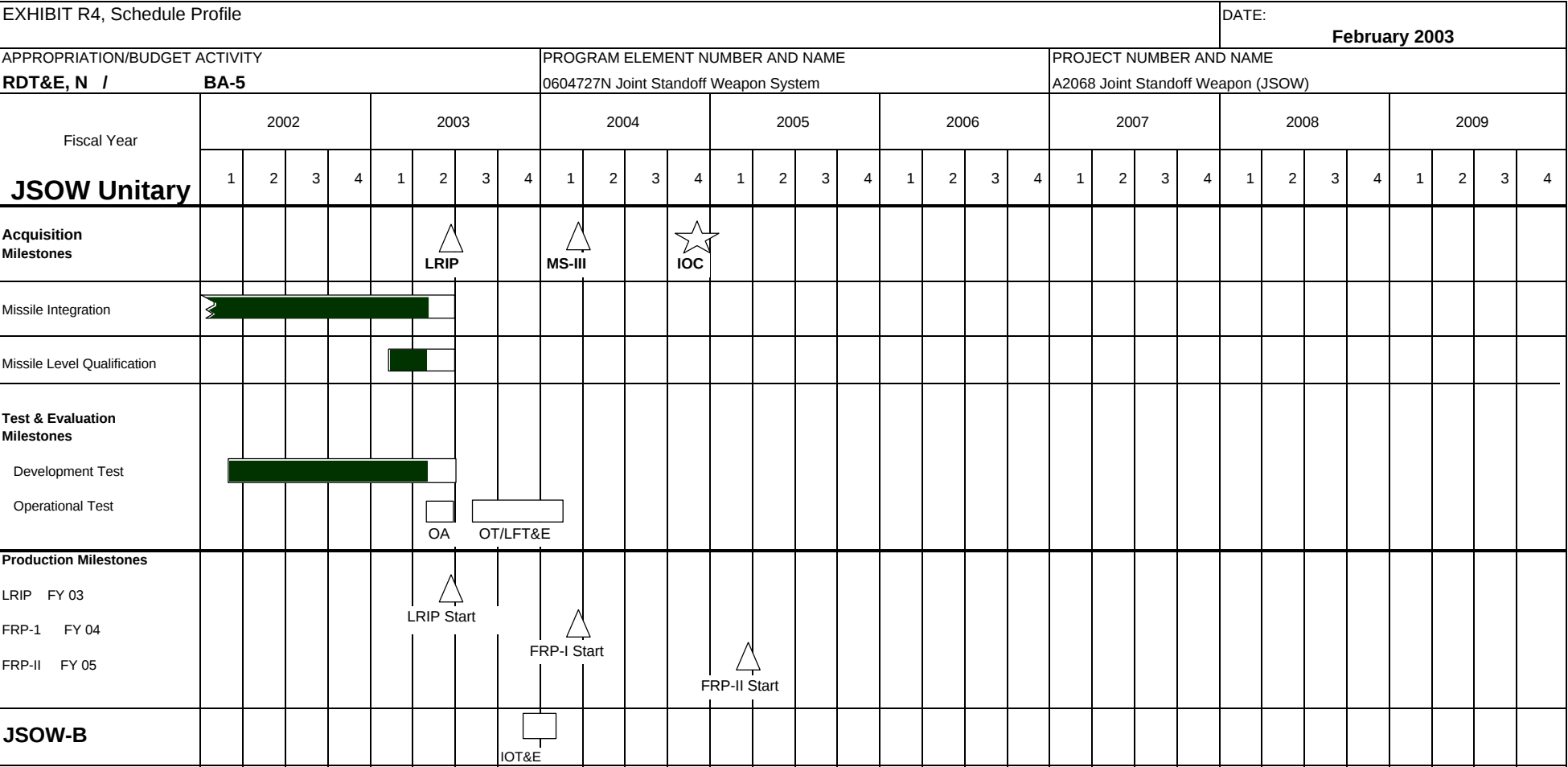
CLASSIFICATION:

| Exhibit R-3 Cost Analysis (page 1) |                        |                                |                                              |            |                  |                                    |                  | DATE: February 2003 |                  |                  |            |                          |
|------------------------------------|------------------------|--------------------------------|----------------------------------------------|------------|------------------|------------------------------------|------------------|---------------------|------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY      |                        |                                | PROGRAM ELEMENT                              |            |                  | PROJECT NUMBER AND NAME            |                  |                     |                  |                  |            |                          |
| RDT&E, N / BA-5                    |                        |                                | 0604727N Joint Standoff Weapon System (JSOW) |            |                  | A2068 Joint Standoff Weapon (JSOW) |                  |                     |                  |                  |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location | Total PY s Cost                              | FY 03 Cost | FY 03 Award Date | FY 04 Cost                         | FY 04 Award Date | FY 05 Cost          | FY 05 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development       | C/CPIF                 | Raytheon Tucson, AZ            | 272.295                                      |            |                  |                                    |                  |                     |                  |                  | 272.295    | 272.295                  |
| Primary Hardware Development       | SS/CPIF                | Raytheon Tucson, AZ            | 242.000                                      | 7.183      | 11/02            |                                    |                  |                     |                  |                  | 249.183    | 249.183                  |
| Ancillary Hardware Development     | SS/CPIF                | Textron                        | 2.923                                        |            |                  |                                    |                  |                     |                  |                  | 2.923      | 2.923                    |
| Ancillary Hardware Development     | SS/FPFF                | BAE Chorley, England           | 10.000                                       | 2.900      | 11/02            |                                    |                  |                     |                  |                  | 12.900     | 12.900                   |
| Aircraft Integration               | SS/CPIF                | Mtech/McDonnell Douglas        | 21.455                                       |            |                  |                                    |                  |                     |                  |                  | 21.455     | 21.455                   |
| Aircraft Integration               | WX                     | NAWCWD China Lake, CA          | 15.058                                       |            |                  |                                    |                  |                     |                  |                  | 15.058     |                          |
| System Engineering                 | WX                     | NAWCWD China Lake, CA          | 105.527                                      | 0.600      | 11/02            |                                    |                  |                     |                  |                  | 106.127    |                          |
| Award Fees                         | FEE                    | Textron / Raytheon             | 7.198                                        |            |                  |                                    |                  |                     |                  |                  | 7.198      | 7.198                    |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
| Subtotal Product Development       |                        |                                | 676.456                                      | 10.683     |                  |                                    |                  |                     |                  |                  | 687.139    |                          |
| Remarks:                           |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
| Software Development               | SS/FPFF                | Raytheon Tucson, AZ            | 2.191                                        | 0.200      | 03/03            | 0.775                              | 10/03            | 0.526               | 10/04            | 1.424            | 5.116      | 5.116                    |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |
| Subtotal Support                   |                        |                                | 2.191                                        | 0.200      |                  | 0.775                              |                  | 0.526               |                  | 1.424            | 5.116      | 5.116                    |
| Remarks:                           |                        |                                |                                              |            |                  |                                    |                  |                     |                  |                  |            |                          |

**CLASSIFICATION:**

|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|------------------------------------|------------------------|--------------------------------|----------------------------------------------|------------|------------------|------------------------------------|------------------|------------|------------------|----------------------------|------------|--------------------------|
| Exhibit R-3 Cost Analysis (page 2) |                        |                                |                                              |            |                  |                                    |                  |            |                  | DATE: <b>February 2003</b> |            |                          |
| APPROPRIATION/BUDGET ACTIVITY      |                        |                                | PROGRAM ELEMENT                              |            |                  | PROJECT NUMBER AND NAME            |                  |            |                  |                            |            |                          |
| <b>RDT&amp;E, N / BA-5</b>         |                        |                                | 0604727N Joint Standoff Weapon System (JSOW) |            |                  | A2068 Joint Standoff Weapon (JSOW) |                  |            |                  |                            |            |                          |
| Cost Categories                    | Contract Method & Type | Performing Activity & Location | Total PY s Cost                              | FY 03 Cost | FY 03 Award Date | FY 04 Cost                         | FY 04 Award Date | FY 05 Cost | FY 05 Award Date | Cost to Complete           | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation    | WX                     | NAWCWD China Lake, CA          | 23.920                                       | 2.200      | 11/02            |                                    |                  |            |                  |                            | 26.120     |                          |
| Operational Test & Evaluation      | WX                     | OPTEVFOR Norfolk, VA           | 5.097                                        | 3.000      | 01/03            |                                    |                  |            |                  |                            | 8.097      |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
| Subtotal T&E                       |                        |                                | 29.017                                       | 5.200      |                  |                                    |                  |            |                  |                            | 34.217     |                          |
| Remarks:                           |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
| Contractor Engineering Support     | Various                | Various                        | 17.350                                       | 0.100      | 11/02            |                                    |                  |            |                  |                            | 17.450     |                          |
| Travel                             | Various                | Various                        | 6.992                                        | 0.100      | 10/02            |                                    |                  |            |                  |                            | 7.092      |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
|                                    |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
| Subtotal Management                |                        |                                | 24.342                                       | 0.200      |                  |                                    |                  |            |                  |                            | 24.542     |                          |
| Remarks:                           |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |
| Total Cost                         |                        |                                | 732.006                                      | 16.283     |                  | 0.775                              |                  | 0.526      |                  | 1.424                      | 751.014    |                          |
| Remarks:                           |                        |                                |                                              |            |                  |                                    |                  |            |                  |                            |            |                          |

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R-1 SHOPPING LIST - Item No. 130

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R-1 SHOPPING LIST - Item No.

130

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**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 9 of 9)