

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: <b>February 2002</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-5</b>						R-1 ITEM NOMENCLATURE 0604618N; Joint Direct Attack Munition (JDAM)					
COST (\$ in Millions)	Prior Year Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Total PE Cost	142.595*		28.066**	55.767***	48.861	35.964	33.804	7.150	0.000	0.000	352.207
A2137/Joint Direct Attack Munition (JDAM)	142.595		28.066	55.767	48.861	35.964	33.804	7.150	0.000	0.000	352.207
Quantity of RDT&E Articles	114		95	35	10	35	25				314
<p>* Note: Prior year funds were executed under Project Unit E2137</p> <p>**The FY 2001 budget reflects a \$3.000M Congressional add for DAMASK Component Packaging executed under A2893, which has been reduced by \$.027 million for Congressional reductions.</p> <p>***The FY 2002 budget reflects \$12.200M PIP Congressional Special Interest Item. Of this amount, \$4.000M is directed for DAMASK.</p> <p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: JDAM is a joint acquisition program combining Department of Navy and Air Force requirements to upgrade existing General Purpose Bomb capabilities in adverse weather and at medium to high altitude releases. The upgrade is accomplished by the addition of a guidance tail kit to existing General Purpose Bombs (2000 lb and 1000 lb inventory bombs). The Air Force is the executive service. The Navy's participation in JDAM involves joint development of JDAM components and support of Navy-Marine Corps unique requirements such as aircraft integration on the F/A-18. JDAM will provide an accurate (defined as not more than 13 meters) adverse weather capability. The program will incorporate commonality with the Joint Standoff Weapon where feasible. The Product Improvement Program (PIP) will integrate precision capabilities with the JDAM weapon system and the F/A-18 ATFLIR for preplanned and reactive strike missions.</p> <p>The JDAM Joint Operational Requirements Document (JORD) has recently been updated to include a requirement for a JDAM capability with the 500lb inventory bomb (MK82). The Air Force will continue to be the executive service for this effort. The Navy is participating in the joint development of the JDAM MK82 and support the Navy-Marine Corps unique requirements such as aircraft integration on the F/A-18, utilizing a smarttrack for additional weapon carriage.</p> <p>114 Guided Test Vehicles (GTVs) were procured in FY96 during the Engineering and Management Development (E&amp;MD) baseline contract. In FY 01, 60 GTVs were procured for MK83 testing, and 35 GTVs were procured for MK82 testing. The 35 GTVs, to be procured in FY 02, will also be for MK-82 testing.</p> <p>(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under ENGINEERING and MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.</p>											

R-1 SHOPPING LIST - Item No. 130

# UNCLASSIFIED

Exhibit R-2, RDTEN Budget Item Justification  
(Exhibit R-2, page 1 of 7)

# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2002</b>			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
<b>RDT&amp;E, N / BA-5</b>	0604618N; Joint Direct Attack Munition (JDAM)					A2137 / Joint Direct Attack Munition (JDAM)					
COST (\$ in Millions)	Prior Year Cost	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program	
Project Cost	142.595	28.066	55.767	48.861	35.964	33.804	7.150	0.000	0.000	352.207	
RDT&E Articles Qty	114	95	35	10	35	25				314	

\* Note: Prior year funds were executed under Project Unit E2137.

\*\*The FY 2001 budget reflects a \$3.000M Congressional add for DAMASK Component Packaging executed under A2893, which has been reduced by \$.027 million for Congressional reductions.

\*\*\*The FY 2002 budget reflects \$12.200M PIP Congressional Special Interest Item. Of this amount, \$4.000M is directed for DAMASK.

U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: JDAM is a joint acquisition program combining Department of Navy and Air Force requirements to upgrade existing General Purpose Bomb capabilities in adverse weather and at medium to high altitude releases. The upgrade is accomplished by the addition of a guidance tail kit to existing General Purpose Bombs (2000 lb and 1000lb inventory bombs). The Air Force is the executive service. The Navy's participation in JDAM involves joint development of JDAM components and support of Navy-Marine Corps unique requirements such as aircraft integration on the F/A-18. JDAM will provide an accurate (defined as not more than 13 meters) adverse weather capability. The Product Improvement Program (PIP) will integrate precision capabilities with the JDAM weapon system and the F/A-18 ATFLIR for preplanned and reactive strike missions.

The JDAM Joint Operational Requirements Document (JORD) has recently been updated to include a requirement for a JDAM capability with the 500lb inventory bomb (MK82). The Air Force will continue to be the executive service for this effort. The Navy is participating in the joint development of the JDAM MK82 and support the Navy-Marine Corps unique requirements such as aircraft integration on the F/A-18, utilizing a smartrack for additional weapon carriage.

114 Guided Test Vehicles (GTVs) were procured in FY96 during the Engineering and Management Development (E&MD) baseline contract. In FY 01, 60 additional GTVs were procured for MK83 testing, and 35 GTVs were procured for MK82 testing. The 35 GTVs, to be procured in FY 02, will also be for MK-82 testing.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. FY 2001 ACCOMPLISHMENTS:

- (U) (\$ 0.695) Continued JDAM baseline MPM support for the transition to JMPS, as well as MPM support for the JDAM MK82 .
- (U) (\$ 7.594) Performed aircraft integration and Operational Flight Program (OFP) software development for the JDAM MK82 and smartrack (BRU-55).
- (U) (\$ 8.305) Performed systems engineering, ILS and program support for the MK82 effort, and preparation for the JDAM PIP MS-I decision.
- (U) (\$ 3.967) Performed engineering analysis, design and integration for the JDAM PIP seeker development, \$3M of which is for the DAMASK Repackaging Effort.
- (U) (\$ 3.789) Completed Developmental Testing (DT) of the MK83 JDAM and procured additional test assets for the MK83 Operational Test (OT).
- (U) (\$ 0.452) Initiated Air Worthiness testing of the MK82 JDAM.
- (U) (\$ 3.264) Procured test assets for the MK82 effort.

R-1 SHOPPING LIST - Item No. 130

# UNCLASSIFIED

**Exhibit R-2, RDTEN Budget Item Justification**  
(Exhibit R-2, page 2 of 7)

# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604618N; Joint Direct Attack Munition (JDAM)	<b>February 2002</b>
<p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS (Continued):</p> <p>2. FY 2002 PLANS:</p> <ul style="list-style-type: none"><li>- (U) (\$ 3.339) Continue JDAM baseline MPM support for the transition to JMPS, as well as MPM support for the JDAM MK82 and PIP effort.</li><li>- (U) (\$ 26.473) Perform aircraft integration, and OFP software development for the JDAM MK82, and PIP ATFLIR effort.</li><li>- (U) (\$ 11.652) Perform systems engineering, ILS and program support for the MK83 MS-III decision, the MK82 effort, and the PIP effort \$4M of which is for DAMASK .</li><li>- (U) (\$ 8.948) Complete Air Worthiness testing and initiate DT of the MK82 JDAM.</li><li>- (U) (\$ 3.666) Continue to procure test assets for the MK82 effort.</li><li>- (U) (\$ 1.689) Portion of extramural program reserved for Small Business Innovative Research (SBIR) assessment in accordance with 15 USC 638.</li></ul> <p>3. FY 2003 PLANS:</p> <ul style="list-style-type: none"><li>- (U) (\$ 4.108) Continue JDAM baseline MPM support for the transition to JMPS, as well as MPM support for the JDAM MK82 and PIP effort.</li><li>- (U) (\$ 26.610) Continue to perform aircraft integration, and OFP software development for the JDAM MK82 and BRU-55 smartrack, and PIP ATFLIR effort.</li><li>- (U) (\$ 11.057) Continue to perform systems engineering, ILS and program support for the MK82 effort, and the PIP program.</li><li>- (U) (\$ 6.056) Complete MK82 DT and perform OPEVAL testing of the MK82 JDAM and BRU-55 smartrack.</li><li>- (U) (\$ 1.030) Procure test assets for the PIP effort.</li></ul>		

R-1 SHOPPING LIST - Item No. 130

**UNCLASSIFIED**

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604618N; Joint Direct Attack Munition (JDAM)			PROJECT NUMBER AND NAME A2137 / Joint Direct Attack Munition (JDAM)			
(U) B. PROGRAM CHANGE SUMMARY:								
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>					
(U) FY 2002 President's Budget:	28.845	56.274						
(U) Adjustments from the President's Budget:	-0.779	-0.507						
(U) FY 2003 President's Budget Submit:	28.066	55.767	48.861					
CHANGE SUMMARY EXPLANATION:								
<p>(U) Funding: The net FY 2001 decrease of \$ 0.779 million was due to a decrease of \$ 0.691 million for a Small Business Innovative Research (SBIR) assessment, and a decrease of \$0.088 million for reprioritization of requirements within the Navy. The FY 2002 decrease of \$ 0.507 million was due to an undistributed Congressional reduction.</p> <p>(U) Schedule: The OT report for MK84/BLU-109 was released Dec 00. As a result, the MK84/BLU-109 MS-III and FRP were completed in 2Q/01 versus 1Q/01. Due to the expanded MK83 testing, technical and acquisition milestones have been rescheduled; MK83 DT rescheduled from 2Q/01 to 4Q/01, MK83 FOT&amp;E/OT rescheduled from 4Q/01 to 3Q/02, MK83 LRIP rescheduled from 1Q/01 to 1Q/02, and MK83 FRP and MS III rescheduled from 2Q/02 to 2Q/03. The PIP AoA completion was delayed from 1Q/01 to 2Q/01, as a result, PIP MS II is planned for 2Q/02.</p> <p>(U) Technical: Not Applicable.</p>								
(U) C. OTHER PROGRAM FUNDING SUMMARY:								
<u>Line Item No. &amp; Name</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete
PAN,MC/B.A.-1 Ammunition - JDAM	69.166	40.763	225.992	177.148	148.973	186.193	175.654	0
DERF - JDAM		162.500						
NAVY Cost of War Adjustment			54.000	106.000	122.000	122.000	113.000	
RDT&E Air Force JDAM - PE 0604618F	10.654	27.679	16.594*	34.816*				
* AF FY2003 & FY2004 includes the Non-Recurring for SASSM and GPS Anti-Jam development.								

R-1 SHOPPING LIST - Item No. 130

# UNCLASSIFIED

**Exhibit R-2, RDTEN Budget Item Justification**  
(Exhibit R-2, page 4 of 7)

# UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604618N; Joint Direct Attack Munition (JDAM)	PROJECT NUMBER AND NAME A2137 / Joint Direct Attack Munition (JDAM)																														
<p>(U) D. ACQUISITION STRATEGY: The Joint Direct Attack Munition (JDAM) program acquisition strategy is derived from the 1994 Federal Acquisition Streamlining Act (FASA). The focus of the program is to reduce acquisition management costs by buying bomb modification kits as if they were commercial items, including obtaining waivers to regulations that affect the efficiency of the contracting process. The JDAM contracting officer has authority to approve individual deviations from any Federal Acquisition Regulation (FAR) and Defense Acquisition Regulation Supplement (DFARS) provision not required by Statute of Executive Order for the JDAM EMD contract. The contract management philosophy includes partnering with the contractor, long term relationships with vendors, negotiations based on prices instead of costs, credit for past performance, and allowing the contractor to determine how to produce the product with the government providing only what the product must do. Cost is an independent variable. JDAM kits have a lifetime (20 year) warranty, significantly reducing Operating and Support costs.</p> <p>(U) E. SCHEDULE PROFILE: *</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;"></th> <th style="width: 15%; text-align: center;"><u>FY 2001</u></th> <th style="width: 15%; text-align: center;"><u>FY 2002</u></th> <th style="width: 15%; text-align: center;"><u>FY 2003</u></th> <th style="width: 20%; text-align: center;"><u>TO COMPLETE</u></th> </tr> </thead> <tbody> <tr> <td>(U) Program Milestones</td> <td>2Q/01 MS-III MK84/BLU-109 2Q/01 IOC MK84/BLU-109</td> <td></td> <td>2Q/03 MK83 MS-III</td> <td></td> </tr> <tr> <td>(U) Engineering Milestones</td> <td>3Q/01 MK82 PDR</td> <td>1Q/02 MK82 CDR</td> <td></td> <td></td> </tr> <tr> <td>(U) T&amp;E Milestones</td> <td>4Q/01 MK83 DT</td> <td>2Q/02 MK82 DT 3Q/02 MK83 OT</td> <td>1Q/03 MK82 OTRR 3Q/03 MK82 OT</td> <td></td> </tr> <tr> <td>(U) Contract Milestones</td> <td>2Q/01 MK84/BLU-109 FRP</td> <td>1Q/02 MK83 LRIP</td> <td>2Q/03 MK83 FRP</td> <td></td> </tr> <tr> <td>(U) Product Improvement</td> <td>2Q/01 PIP AoA complete</td> <td>2Q/02 PIP MSII</td> <td></td> <td>2Q/05 PIP DT 2Q/06 PIP OT</td> </tr> </tbody> </table>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>	(U) Program Milestones	2Q/01 MS-III MK84/BLU-109 2Q/01 IOC MK84/BLU-109		2Q/03 MK83 MS-III		(U) Engineering Milestones	3Q/01 MK82 PDR	1Q/02 MK82 CDR			(U) T&E Milestones	4Q/01 MK83 DT	2Q/02 MK82 DT 3Q/02 MK83 OT	1Q/03 MK82 OTRR 3Q/03 MK82 OT		(U) Contract Milestones	2Q/01 MK84/BLU-109 FRP	1Q/02 MK83 LRIP	2Q/03 MK83 FRP		(U) Product Improvement	2Q/01 PIP AoA complete	2Q/02 PIP MSII		2Q/05 PIP DT 2Q/06 PIP OT
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>																												
(U) Program Milestones	2Q/01 MS-III MK84/BLU-109 2Q/01 IOC MK84/BLU-109		2Q/03 MK83 MS-III																													
(U) Engineering Milestones	3Q/01 MK82 PDR	1Q/02 MK82 CDR																														
(U) T&E Milestones	4Q/01 MK83 DT	2Q/02 MK82 DT 3Q/02 MK83 OT	1Q/03 MK82 OTRR 3Q/03 MK82 OT																													
(U) Contract Milestones	2Q/01 MK84/BLU-109 FRP	1Q/02 MK83 LRIP	2Q/03 MK83 FRP																													
(U) Product Improvement	2Q/01 PIP AoA complete	2Q/02 PIP MSII		2Q/05 PIP DT 2Q/06 PIP OT																												

R-1 SHOPPING LIST - Item No. 130

# UNCLASSIFIED

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Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2002</b>		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME					
<b>RDT&amp;E, N / BA-5</b>			0604618N; Joint Direct Attack Munition (JDAM)				A2137 / Joint Direct Attack Munition (JDAM)					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
OFP Development	WX	AWL/CL	18.261	1.897	11/00	8.225	11/01	10.081	11/02	2.527	40.991	
Mission Planning Development	C/CPAF	Raytheon, Tucson, AZ	6.012	0.615	11/00	3.167	01/02	3.078	11/02	4.664	17.536	17.536
Aircraft Integration	SS/CPAF	Boeing	7.578	4.974	01/01	17.548	01/02	16.247	11/02	32.974	79.321	79.321
MK82 Development	C/CPAF	Boeing, St. Louis, MO	4.290	5.267	12/00	0.573	02/02	1.764	01/03	0.000	11.894	11.894
In-House Support	WX	NAWC, CL	45.797	6.557	10/00	7.817	10/01	8.451	10/02	15.186	83.808	
Misc (efforts under \$1M-Aggregate)	Various	Various	4.729	0.262	11/00	0.500	11/01			0.000	5.491	
Award Fees	C/CPAF/M	Boeing	0.969								0.969	0.969
<b>Subtotal Product Development</b>			<b>87.636</b>	<b>19.572</b>		<b>37.830</b>		<b>39.621</b>		<b>55.351</b>	<b>240.010</b>	
Remarks: Prior year funds were under Proj Unit E2137.												
Travel	P.D	JDAM	1.313	0.190	10/00	0.190	10/01	0.190	10/02	0.400	2.283	
Engineering Services	Various	Various	11.267	1.133	10/00	1.655	11/01	1.793	10/02	4.081	19.929	
<b>Subtotal Support</b>			<b>12.580</b>	<b>1.323</b>		<b>1.845</b>		<b>1.983</b>		<b>4.481</b>	<b>22.212</b>	
Remarks: Prior year funds were under Proj Unit E2137.												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2002		
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RDT&E, N / BA-5			0604618N; Joint Direct Attack Munition (JDAM)			A2137 / Joint Direct Attack Munition (JDAM)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWC/CL	16.144	1.122	10/00	8.646	10/01	2.876	10/02	6.746	35.534	
Operational Test & Evaluation	PD	OPTEVFOR	3.121	0.020	10/00	1.781	01/02	3.008	01/03	0.919	8.849	
Test Assets	MIPR	Boeing, St Louis, MO	13.592	5.253	10/00	3.604	01/02	1.030		8.340	31.819	31.819
Misc. (efforts under \$1M-Aggregate)	Various	Various	3.850	0.624	11/00	0.062	11/01				4.536	
Subtotal T&E			36.707	7.019		14.093		6.914		16.005	80.738	
Remarks: Prior year funds were under Proj Unit E2137.												
Misc. (efforts under \$1M-Aggregate)	Various	Various	5.672	0.152	11/00	0.310	02/02	0.343	03/03	1.081	7.558	
SBIR assessment						1.689						
Subtotal Management			5.672	0.152		1.999		0.343		1.081	9.247	
Remarks: Prior year funds were under Proj Unit E2137.												
Total Cost			142.595	28.066		55.767		48.861		76.918	352.207	
Remarks:												

R-1 SHOPPING LIST - Item No. 130

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