

Business Area Capital Investment Justification (\$ in Thousands)							A. Budget Submission FY 2005 PRESIDENT'S BUDGET SUBMISSION					
B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 1/151-Ton Capacity Portal Crane(Replacement)			D. Site Identification NNSY Portsmouth, VA					
				FY 2003			FY 2004			FY 2005		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP							1	16100	16650			
Narrative Justification:												
Description												
Provide heavy lift crane capability to the shipyard's Aircraft Carrier Dry-dock, 22 berths, and 6 major industrial buildings where no comparable lifting capacity exists. Sample lift: 140-ton Deck Edge elevator. This crane will improve safety by increasing the cab-height 27 feet enabling the operator to look down on carrier flight deck. Crane design will prevent overload and stop the load in event of machinery failure. This crane is urgently needed by August 2006 to support the planned fleet reconstruction workload. \$1.4M advanced planning request FY-04.												
Justification												
Mission Capability: Norfolk Naval Shipyard (NNSY) requires heavy lift capacity on 40-gage rail circuit to support the simultaneous ship availabilities of 3 aircraft carriers (CVN-class), 2 SSBN-class and 1 SSN-class submarine. This new crane will provide the sole heavy lift capability to the 40 foot rail circuit. It will allow disposal of two 84 ton, 62 year old portal cranes that would otherwise require overhaul projected to cost \$29 Million. Eliminating these overhauls will result in an immediate payback for this project. These two cranes can currently perform heavy lifts in a limited area by making complex tandem lifts which have safety concerns. Additional savings will be realized from reduced maintenance & production delays due to breakdown. Safety will be enhanced by eliminating exposed electrical & rotating components, lead paint, and asbestos.												
Impact												
Failure to procure this crane will leave the shipyard with no heavy lift capability in the 40 foot rail circuit and unable to perform its mission. The August 2006 in-service need date is based on the FY07 planned facility modification in the large dry-dock area. This mod will impact operational capability by severing the rail at the head of the dry-dock early first quarter of FY07. Placing the new 151-ton crane on the North side of the dry-dock in August 2006 allows the 2 existing 84-ton cranes to be placed on the South side of the dry-dock, thus enabling the shipyard to maintain heavy lift capability on all of the 40-foot gage circuit. Delay of this project will preclude use of the existing multi crane procurement contract and delay delivery until at least May 2008 at an increased cost of between \$3M to \$5M.												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 3/HIGH SPEED PROPELLER PROFILER(Productivity)			D. Site Identification NFPC Norfolk Det, Philadelphia, PA					
				FY 2003			FY 2004			FY 2005		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP				1	5000	6000						
Narrative Justification:												
Description												
<p>The high speed profiler is a 5-axis Computer Numerical Control (CNC) milling machine with a large 24 ft "C" axis table and a set-up station covered by the "X" axis travel of the machine. A 100 HP motor is mounted on a sliding saddle that form the "Y" and "Z" axes. A rotating turret type head contains the spindle that moves in "A" and a redundant "C" axes. The machine is capable of automatic spindle and tool changes and has 600 ipm of translational speeds and 16,000 RPM spindle rotation speed. The set-up station will be equipped with an inspection system that will be used to qualify the casting and in-process inspection.</p>												
Justification												
<p>NFPC requires a high speed profiler in order to reduce the overall cost to the program by reducing the machining time (50-90%) thereby improving delivery of the Virginia class propulsor. Existing profilers are very slow machines capable of, at best 1 in3/mn metal removing rate. The NAVSEA sponsored propulsor affordability Manufacturing Technology (MT) project has one of its main objectives the technology transfer to Navy Foundry and Propeller Center (NFPC) of high speed machining data obtained from NIST and Battelle labs (Oak Ridge). The project has as of this date proven the feasibility of contour milling Nickel Aluminum Bronze alloys at 14,000 RPM and 600 ipm during tests at National Institute of Standards and Technology (NIST). The proposed machine will be able to employ all the parameters that will be developed during the first two phases of the project and will allow NFPC to reduce costs and deliver propulsors in less time.</p>												
Impact												
<p>NFPC's is the only manufacturer of submarine propulsors. The existing machining assets are old and are going through a retrofit program that aims to maintain the existing capability. Without improvements in NFPC's core capability, coupled with stringent tolerances on Virginia blades, our ability to provide propulsors within costs and on time will be seriously degraded. This machine is therefore essential to NFPC's ability to support the submarine fleet.</p>												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 5/OFF HULL REFUELING ENCLOSURE(New Mission)			D. Site Identification NNSY Portsmouth, VA					
				FY 2003			FY 2004			FY 2005		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP	1	0	200	1	3313	3513						
Narrative Justification:												
Description												
The Off Hull Refueling Enclosure (OHRE) will be an approximately 31' x 33' x 45' tall steel enclosure equipped with a mechanical roof hatch, a 5 ton bridge crane, ventilation system, fluid system and supporting electrical and communication systems. It will be located over a pile supported concrete foundation equipped with a pit to provide shielding for radioactive materials.												
Justification												
Planning schedules for Norfolk Naval Shipyard (NNSY) currently indicate parallel refueling availabilities for SSN-688 Class and SSBN-726 Class submarines. Refueling availabilities can only be fully supported at the Dry Dock #4 facility, which is currently undergoing renovation to support SSBN-726 Class submarine refueling availabilities. The facilities at the Dry Dock #2/3 Defueling Complex will not support a refueling availability without requiring the use of sections of the Dry Dock #4 facility. Parallel refueling availabilities necessitate the use of the Dry Dock #2/3 facility, which requires the shipyard to share work performance of key operations the work must be performed in series, this creates schedule delays and at the Dry Dock #4 complex. During the increases the cost of the availabilities. The OHRE would provide an enclosure to allow fully supporting a refueling availability at the Dry Dock #2/3 complex.												
Impact												
Inefficiencies in equipment staging, component storage and on-going operations would result in a 14 day increase in critical path time for a refueling conducted at Dry Dock #2/3. Also, staging and storage of equipment at Dry Dock #4 for use at Dry Dock #2/3 would result in additional delay and disruption to ongoing operations at both complexes. Depending upon the level of operations being performed, this delay could be as much as an additional 7 days to either or both availabilities.												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 7/SHAFT LATHE RETROFIT(Productivity)			D. Site Identification PNSY Portsmouth, NH					
				FY 2003			FY 2004			FY 2005		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Non ADP	1	0	40	1	1500	1500						
Narrative Justification:												
Description												
This project rebuilds a Farrel/Betts lathe, Naval Identification (NID) 165-310693. Rebuild will include carriage drives, taper attachment, headstock, tailstock, bed machining, and a computer numerical control (CNC) retrofit.												
Justification												
Portsmouth Naval Shipyard (NAVSHIPYD PTSMH) is a primary depot for the refurbishment of propulsion shafts for SSN 688 and Trident Class submarines. While a SSN 688 propulsion shaft is one piece a Trident shaft is two pieces each requiring similar repair effort. There are over forty potential operations performed in the clean and inspect cycle as well as the repair and machine cycle. Expected turn around time for a SSN 688 shaft is 18 months and 30 months for a Trident shaft. However, since most of these shafts are being refurbished for the third or fourth time their condition is such that the standard repair is not adequate. Significant welding and machining is required nearly doubling turn around time in some cases. Not all of the backup is a result of the repairs themselves. Many delays are a result of waiting for inspections, results, approvals, service trades, and machine time. Although the customer doesn't pay for delay time it impacts schedules, backlog, and throughput. Since many of the operations require a shaft to be in a lathe a significant amount of delay is caused by a shortage of machine capacity. A third machining asset would enable us to reduce delays due to machine capacity, reduce turn around time, and increase throughput. We estimate that an increase of three shafts per year to our workload is possible while still maintaining an acceptable delivery schedule for our customer. Based on standard fees for refurbing SSN 688 and Trident propulsion shafts an increase of \$775,000 to yearly revenues is possible. Payback would be realized in 3.82 years, with an annual savings of \$435,000.												
Impact												
Execution of this project will increase throughput, reduce customer backlog, and provide the Navy with greater readiness of an essential inventory component.												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004	C. Line# and Description 9/Miscellaneous (Non ADP < \$1000K; >= \$500K)	D. Site Identification NA		
		FY 2003	FY 2004	FY 2005
ELEMENTS OF COST		Total Cost	Total Cost	Total Cost
TOTAL COST		6863	1200	1994
TANK CLEANING VACUUM SYSTEM (NNSY Portsmouth, VA)			500	490
HP AIR COMPRESSOR, PORTABLE (PSNSY Bremerton, WA)		955		
CNC DRILLING/MILLING MACHINE (8 FT X 9 FT) (PSNSY Bremerton, WA)		899		
TRIDENT MATERIAL HIGHWAY (PSNSY Bremerton, WA)		840		
VERTICAL RECIPROCATING CONVEYOR (DD-1) (PSNSY Bremerton, WA)		725		
CASUALTY CONTROL SYSTEM (PNSY Portsmouth, NH) 151-Ton Capacity Portal Crane, Design Support (NNSY Portsmouth, VA)			700	804
BRIDGE CRANES, 35 TON, B300 (PNSY Portsmouth, NH)				700
LASER CUTTING SYSTEM, CO2 (PNSY Portsmouth, NH)		650		
CRANE UPGRADE, BRIDGE (B-856 #035403) (PSNSY Bremerton, WA)		555		
BLAST BOOTH (B-873) (PSNSY Bremerton, WA)		595		
HORIZ BORING MILL REPLACEMENT (NNSY Portsmouth, VA)		553		
VERTICAL LAUNCH SYSTEM (VLS) PLATFORM (PSNSY Bremerton, WA)		550		
ODT BLAST SYSTEM - Rev. A (NNSY Portsmouth, VA)		541		

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004		C. Line# and Description 10/Miscellaneous (Non ADP < \$500K)		D. Site Identification NA
		FY 2003	FY 2004	FY 2005
ELEMENTS OF COST		Total Cost	Total Cost	Total Cost
TOTAL COST		6488	2062	2807
Total number of projects = 50				

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 12/NSY Server Replacement(Hardware)			D. Site Identification NSY Arlington, VA (MSSD)					
				FY 2003			FY 2004			FY 2005		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
ADP				1	1968	1968						
Narrative Justification:												
Description												
This project supports the replacement and technological refreshment of the standard configuration information technology (IT) applications servers supporting the corporate standard information systems in the naval shipyards. There are 27 corporate standard applications that support depot maintenance operations in the shipyards including Baseline Advanced Industrial Management (BAIM), Performance Monitoring, Shipyard Management Information System (SYMIS) Material and Financial Management, Laboratory Analysis, and Hazardous Substance Management and Monitoring, as well as specialty applications for Facilities and Radiological Controls Monitoring. Much of this equipment was installed three or more years ago.												
Justification												
This equipment is required to replace aging and obsolete equipment. This equipment is also required to ensure compatibility with Enterprise Resource Planning (ERP) platforms planned for the regional maintenance consolidation functions. All equipment is acquired centrally for configuration control and management, economy of scale and maximum discount. In addition, equipment will be consolidated, where feasible, for greater economy and resource savings. This equipment is required to replace currently outdated equipment that will remain in the shipyards for the next 4-5 years.												
Impact												
If not replaced, the shipyards will be left with obsolete equipment for which there is no vendor maintenance, thus jeopardizing the shipyard's ability to assure uninterrupted, seamless communications capability for depot maintenance progress reporting. Shipyards will experience high levels of downtime and lost productivity.												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 13/NSY Server replacement(Hardware)			D. Site Identification NSY Arlington, VA (MSSD)					
FY 2003				FY 2004			FY 2005					
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
ADP							1	1462	1462			
Narrative Justification:												
Description												
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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004	14/Miscellaneous (ADP < \$1000K; >= \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	0	540	0	
Secure Network Upgrade (PNSY Portsmouth, NH (MSSD))		540		

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 15/Electronic Waterfront Paperless System (EWPS)(Internally Developed)			D. Site Identification PNSY Portsmouth, NH (MSSD)					
FY 2003				FY 2004			FY 2005					
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Software							1	3000	3000			
Narrative Justification:												
Description												
The objective of the Electronic Waterfront Paperless System (EWPS) pilot is to test a solution for cost reduction to non-nuclear work for submarine overhauls. The pilot will test the use of hand held devices geared towards reducing the cost of direct support services on submarine availabilities by improving the efficiency of Technical Work Document (TWD) handling and administration. The TWD is built by the planning organization and customized to fit each task. It contains the information or references the waterfront worker needs to complete the task. Hand held devices will be used to display and record information in the TWD, making it the central point to access related information or resources which are currently provided by hard copy or are not available. The system will also allow data entered by the waterfront worker to be retrieved, validated and fed back to other information systems.												
Justification												
Significant effort is expended handling paper documents as work is staged, executed, completed and certified. EWPS will eliminate cumbersome manual processes and increase the accuracy of recorded data by providing Technical Work Documents (TWD) in an electronic, interactive format. The TWD becomes the central point from which to access the information held in the Naval Shipyard's information systems. Data captured at the work site can then be fed back to other information systems. Benefits are achieved by reducing the manual effort required to manage ship maintenance. The functions targeted for automation are direct support services involved with TWD packaging, tracking, and certification.												
Impact												
The EWPS will reduce the mandays required for ship maintenance. The pilot is geared towards a reduction in mandays on the SSN 688 class. All the backup information to the technical work document will be contained on the hand held and available to the worker on-site. The target of the pilot is to yield sufficient output and metrics to determine if savings warrant rollout to other activities.												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 16/NSY Ship Maintenance Corporate SW Development(Internally Developed)			D. Site Identification NSY Arlington, VA (MSSD)					
				FY 2003			FY 2004			FY 2005		
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Software				1	1080	1080	1	947	947			
Narrative Justification:												
Description												
The naval shipyards require continued upgrades and enhancements to their standard ship/fleet maintenance core business systems supporting the high visibility 688 submarine/carrier availabilities or other "Lean 7" initiatives. Further, the systems utilized support the continued requirement for business process improvements to achieve higher efficiencies in the workplace. These systems include: Baseline Advanced Industrial Management (BAIM), AIM Express, Performance Measurement, Material Requirements, Financial/Material Management, Workload Forecasting, Radiological Controls and Hazardous Substance Management and Monitoring, among others. The priority software upgrades have been selected based on calculated return on investment of less than one year, direct support of 688 class submarine factory program, assist in the transition to Enterprise Resource Planning (ERP) and/or potential contribution of the initiative to the strategic sourcing wedge. These systems are reported under AIM, SYMIS and DMSS in the IT budget.												
Justification												
These projects will contribute to enhanced business performance, improved business processes, and contribute to strategic sourcing wedge.												
Impact												
If this project is not funded, Navy will lose the opportunity to continue with Business Process Reengineering (BPR) and its contribution to depot/regional maintenance cost reduction initiatives. These applications are not expected to be replaced by the emerging ERP initiative.												

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B. Component/Business Area/Date DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004				C. Line# and Description 17/Upgrade AIM(Internally Developed)			D. Site Identification PNSY Portsmouth, NH (MSSD)					
FY 2003				FY 2004			FY 2005					
ELEMENTS OF COST	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost	Qty	Unit Cost	Total Cost			
Software				1	1620	1620						
Narrative Justification:												
Description												
The Advanced Industrial Management (AIM) program is the standard tool for planning. Although ERP will eventual take over, it is expected that the shipyards will continue to use AIM through FY09, to complete the 688 class refuelings and the SGN's inactivations. By FY04, AIM will require upgrades to enable the use of and integration with new technology and new capabilities such as web enabling. DoD direction and drive is to migrate systems towards web enabling when there are benefits to doing so.												
Justification												
Web enabling AIM will facilitate the transition to ERP, customize business rules, and ease the input of Ships Force work as well as ease the access to archived information. Through web enabling the shipyards will increase the visibility and use of shared technical work documents. Web enabling will reduce the requirement for AIM servers to be present in each site and improve system security.												
Impact												
Without the upgrades, the shipyards will not be able to take advantage of the increased visibility. There will be an increased cost of system maintenance and test and certification in light of NMCI.												

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B. Component/Business Area/Date	C. Line# and Description	D. Site Identification		
DEPOT MAINTENANCE - SHIPYARDS/ FEBRUARY 2004	21/Miscellaneous (Minor Construction < \$500K)	NA		
	FY 2003	FY 2004	FY 2005	
ELEMENTS OF COST	Total Cost	Total Cost	Total Cost	
TOTAL COST	2519	1000	510	
Total number of projects = 12				