

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2011

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

For the transition period from            to

Commission file number 1-16411

**NORTHROP GRUMMAN CORPORATION**

(Exact name of registrant as specified in its charter)

**DELAWARE**

(State or other jurisdiction of  
incorporation or organization)

**80-0640649**

(I.R.S. Employer  
Identification Number)

**2980 Fairview Park Drive, Falls Church, Virginia 22042 (703) 280-2900**

(Address and telephone number of principal executive offices)

Securities registered pursuant to section 12(b) of the Act:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$1 par value	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes

No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act.

Yes

No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes

No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes

No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes

No

As of July 1, 2011, the aggregate market value of the common stock (based upon the closing price of the stock on the New York Stock Exchange) of the registrant held by non-affiliates was approximately \$19.5 billion.

As of February 6, 2012, 252,631,776 shares of common stock were outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of Northrop Grumman Corporation's Proxy Statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A for the 2012 Annual Meeting of Stockholders are incorporated by reference in Part III of this Form 10-K.



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**NORTHROP GRUMMAN CORPORATION**

**PART I**

**Item 1. Business**

**HISTORY AND ORGANIZATION**

**History**

Northrop Grumman Corporation (herein referred to as “Northrop Grumman,” the “company,” “we,” “us,” or “our”) provides technologically advanced, innovative products, services, and integrated solutions in aerospace, electronics, information and services to our global customers. We participate in many high-priority defense and government services technology programs in the United States (U.S.) and abroad as a prime contractor, principal subcontractor, partner, or preferred supplier. We conduct most of our business with the U.S. Government, principally the Department of Defense (DoD) and intelligence community. We also conduct business with local, state, and foreign governments and domestic and international commercial customers. For a discussion of risks associated with our operations, see Risk Factors in Part I, Item 1A.

The company was originally formed in 1939 as Northrop Corporation and was later reincorporated in Delaware in 1985. Some of the most notable acquisitions during the last two decades included the acquisition of Grumman Corporation (Grumman) in 1994, after which time the company was renamed Northrop Grumman Corporation. Grumman was a premier military aircraft systems integrator and builder of the Lunar Module that first delivered men to the surface of the moon. In 1996, we acquired the defense and electronics businesses of Westinghouse Electric Corporation (Westinghouse), which now forms the nucleus of the Electronics Systems segment. Westinghouse was a world leader in the development and production of sophisticated radar and other electronic systems for the nation’s defense, civil aviation, and other international and domestic applications. In 2001, we acquired Litton Industries, a global electronics and information technology enterprise, and one of the nation’s leading full-service design, engineering, construction, and life cycle supporters of major surface ships for the United States (U.S.) Navy, U.S. Coast Guard, and international navies. Also in 2001, we acquired Newport News Shipbuilding, the nation’s sole designer, builder and refueler of nuclear-powered aircraft carriers and one of only two companies designing and building nuclear-powered submarines. In 2002, we acquired TRW Inc. (TRW), a leading developer of military and civil space systems and satellite payloads, as well as a leading global integrator of complex, mission-enabling systems and services. Other more recent acquisitions included the acquisition of Integic Corporation (2005), an information technology provider specializing in enterprise health and business process management solutions, and Essex Corporation (2007), a signal processing product and services provider to U.S. intelligence and defense customers.

**Spin-off of Shipbuilding Business**

Effective as of March 31, 2011, the company completed the spin-off to its shareholders of Huntington Ingalls Industries, Inc. (HII). HII operates our former Shipbuilding business. The spin-off was the culmination of the company’s decision to explore strategic alternatives for Shipbuilding, as it was determined to be in the best interests of shareholders, customers, and employees by allowing the company and Shipbuilding to pursue more effectively their respective opportunities to maximize value. As a result of the spin-off, assets, liabilities and results of operations for the former Shipbuilding segment have been reclassified as discontinued operations for all periods presented. See Note 6 to our consolidated financial statements in Part II, Item 8 for further information.

**Organization**

From time to time, we acquire or dispose of businesses, and realign contracts, programs or business areas among and within our operating segments that possess similar customers, expertise, and capabilities. Internal realignments are designed to more fully leverage existing capabilities and enhance development and delivery of products and services. The operating results for all periods presented have been revised to reflect these changes made through December 31, 2011.

We are currently aligned into four operating segments: Aerospace Systems, Electronic Systems, Information Systems, and Technical Services. See Note 7 to our consolidated financial statements in Part II, Item 8.

## **NORTHROP GRUMMAN CORPORATION**

### **AEROSPACE SYSTEMS**

Aerospace Systems, headquartered in Redondo Beach, California, is a leader in the design, development, integration and production of manned and unmanned aircraft, spacecraft, high-energy laser systems, microelectronics and other systems and subsystems. Aerospace Systems' customers, primarily domestic government agencies, use these systems in many different mission areas including intelligence, surveillance and reconnaissance; communications; battle management; strike operations; electronic warfare; missile defense; earth observation; space science; and space exploration. The segment consists of four business areas: Strike & Surveillance Systems; Space Systems; Battle Management & Engagement Systems; and Advanced Programs & Technology.

*Strike & Surveillance Systems* – designs, develops, manufactures and integrates tactical and long-range strike aircraft systems, unmanned systems, and missile systems. Key programs include the RQ-4 Global Hawk unmanned reconnaissance system, B-2 stealth bomber, F-35 Lightning II (F-35), F/A-18 Super Hornet strike fighter, Minuteman III Intercontinental Ballistic Missile (ICBM), MQ-8B Fire Scout unmanned aircraft system, and Multi-Platform Radar Technology Insertion Program (MP-RTIP).

*Space Systems* – designs, develops, manufactures, and integrates spacecraft systems, subsystems and electronic and communications payloads. Major programs include the James Webb Space Telescope (JWST), Advanced Extremely High Frequency (AEHF) payload and many restricted programs.

*Battle Management & Engagement Systems* – designs, develops, manufactures, and integrates airborne early warning, surveillance, battlefield management, and electronic warfare systems. Key programs include the E-2 Hawkeye, Joint Surveillance Target Attack Radar System (Joint STARS), Broad Area Maritime Surveillance (BAMS) unmanned aircraft system, EA-6B Prowler and its next generation platform, the EA-18G Growler, and Long Endurance Multi Intelligence Vehicle (LEMV).

*Advanced Programs & Technology* – creates advanced technologies and concepts to satisfy existing and emerging customer needs. This business area matures these technologies and concepts to create and capture new programs that other Aerospace Systems business areas can execute. Existing programs include the Navy Unmanned Combat Air System (N-UCAS), and other directed energy and advanced concepts programs.

### **ELECTRONIC SYSTEMS**

Electronic Systems, headquartered in Linthicum, Maryland, is a leader in the design, development, manufacture, and support of solutions for sensing, understanding, anticipating, and controlling the environment for our global military, civil, and commercial customers and their operations. Electronic Systems provides a variety of defense electronics and systems, airborne fire control radars, situational awareness systems, early warning systems, airspace management systems, navigation systems, communications systems, marine systems, space systems, and logistics services. The segment consists of five business areas: Intelligence, Surveillance, & Reconnaissance Systems; Land & Self Protection Systems; Naval & Marine Systems; Navigation Systems; and Targeting Systems.

*Intelligence, Surveillance & Reconnaissance (ISR) Systems* – delivers products and services for space satellite applications, airborne and ground based surveillance, multi-sensor processing, analysis, and dissemination for combat units and national agencies both domestically and internationally, providing battlespace awareness, missile defense, and command and control. The division continues to develop advanced space-based radar and electro-optical early warning and surveillance systems for strategic, tactical, and weather operations along with systems for enhancing the discovery, sharing, and exploitation of ISR data. Key products include the Space-Based Infrared System (SBIRS), Defense Meteorological Satellite Program (DMSP), Defense Support Program (DSP), ground processing, exploitation and dissemination systems, the TPS-78/703 family of ground based surveillance radars, and the Multi-role Electronically Scanned Array (MESA) radar.

*Land & Self Protection Systems* – delivers products, systems, and services that support ground-based, helicopter and fixed wing platforms (manned and unmanned) with sensor and protection systems. These systems perform threat detection and countermeasures that defeat infrared and radio frequency (RF) guided missile and tracking systems.

## **NORTHROP GRUMMAN CORPORATION**

The division also provides integrated electronic warfare capability, communications, and intelligence systems; unattended ground sensors; automatic test equipment; and advanced threat simulators. Key programs include the U.S. Marine Corps Ground/Air Task Oriented Radar (G/ATOR) multi-mission radar; the Large Aircraft Infrared Countermeasures (LAIRCM) system for the U.S. Air Force, U.S. Navy, and strategic international and NATO allies; the AN/ALQ-131(V) electronic countermeasures pod; the LR-100 high-performance radar warning receiver (RWR)/electronic support measures (ESM)/electronic intelligence (ELINT) receiver system; the U.S. Army's STARLite Synthetic Aperture Radar for Unmanned Aerial Vehicles (UAVs); the U.S. Army Vehicle Intercom Systems (VIC-3 and VIC-5); the U.S. Army Next Generation Automated Test System (NGATS); the U.S. Air Force Joint Threat Emitter (JTE) training range system; and the Vehicle and Dismount Exploitation Radar (VADER) system that enable airborne platforms to track individual persons or vehicles.

*Naval & Marine Systems* – delivers products and services to defense, civil, and commercial customers supporting smart navigation, shipboard radar surveillance, ship control, machinery control, integrated combat management systems for naval surface ships, high-resolution undersea sensors (for mine hunting, situational awareness, and other applications), unmanned marine vehicles, shipboard missile and encapsulated payload launch systems, propulsion and power generation systems, and nuclear reactor instrumentation and control. Key products include Integrated Bridge and Navigation Systems, Voyage Management System, Integrated Platform Management Systems, Integrated Combat Management System, AN/WSN-7 Inertial Navigator, anti-ship missile defense and surveillance radars (Cobra Judy, AN/SPQ-9B, AN/SPS-74), propulsion equipment, missile launch, and sonar systems for the *Virginia*-class submarine, and launch system support for the *Ohio*-class submarine.

*Navigation Systems* – delivers products and services to defense, civil, and commercial customers supporting situational awareness, inertial navigation in all domains (air, land, sea, and space), embedded Global Positioning Systems, Identification Friend or Foe (IFF) systems, acoustic sensors, cockpit video monitors, mission computing, and integrated avionics and electronics systems. Key products include the Integrated Avionics System, the AN/TYQ-23 Aircraft Command and Control System, Fiber Optic Acoustic Sensors, and a robust portfolio of inertial sensors and navigation systems.

*Targeting Systems* – delivers products and services supporting airborne combat avionics (fire control radars, multi-function apertures and pods), airborne electro-optical/infrared targeting systems, and laser/electro-optical systems including hand-held, tripod-mounted, and ground or air vehicle mounted systems. Key products include fire control radars for the B-1B, F-16 (worldwide), F-22 U.S. Air Force, and F-35; AN/APN-241 navigation/weather radar; the AN/AAQ-28(V) LITENING family of targeting pods; Distributed Aperture EO/IR systems; and the Lightweight Laser Designator Rangefinder (LLDR).

In addition to the product and service lines discussed above, the Electronic Systems segment also includes the Advanced Concepts & Technologies Division (AC&TD), which develops next-generation systems and architectures to position the segment in key developing markets. AC&TD focuses on understanding customer mission needs; conceiving affordable, innovative and open solutions; and demonstrating the readiness and effectiveness of Electronic Systems' products, including all types of sensors, microsystems, and associated information systems. The segment uses a "Product Ownership" approach, which guides the transition of new technology from laboratory to market and implements modular open system product families that are readily reconfigurable and scalable to affordably support new requirements, new products, or component obsolescence.

## **INFORMATION SYSTEMS**

Information Systems, headquartered in McLean, Virginia, is a leading provider of advanced solutions for the DoD, national intelligence, federal civilian, state and local agencies, and commercial and international customers. Products and services focus on the fields of command, control, communications, computers (C4) and intelligence; airborne reconnaissance; intelligence processing; air and missile defense; decision support systems; cybersecurity; information technology; and systems engineering and integration. The segment consists of three business areas: Defense Systems; Intelligence Systems; and Civil Systems.

## **NORTHROP GRUMMAN CORPORATION**

*Defense Systems* – is a major end-to-end provider of net-enabled Battle Management, C4 Intelligence, Surveillance, and Reconnaissance (C4ISR) systems, decision superiority, and mission-enabling solutions and services in support of the national defense and security of our nation and its allies. Defense Systems is a prime developer and integrator of many of the DoD’s programs-of-record, particularly for command and control (C2) and communications for the U.S. Air Force, U.S. Army, U.S. Navy, and Joint Forces. Major products and services include C4ISR Integration, Mission Systems Integration, Military Communications and Networks, Battle Management C2 and Decision Support Systems, Tactical and Operational C2, Ground and Maritime Combat Systems, Air and Missile Defense, Combat Support Solutions and Services, Enterprise Infrastructure and Applications, Defense Logistics Systems, Identity Management and Biometric Solutions, Cloud Computing, Maritime Mission Systems and Force and Critical Infrastructure Protection. Systems are installed in operational and command centers worldwide and across all DoD services and joint commands.

*Intelligence Systems* – is focused on the delivery of intelligence-related systems and services to the U.S. Government and the international security community. Intelligence Systems focuses on several mission areas including Airborne Intelligence, Signals Intelligence (SIGINT) Systems, Cybersecurity, Geospatial Intelligence, Pervasive Intelligence, Surveillance and Reconnaissance (ISR), Ground Systems, Multi-Source Intelligence Data Fusion, and Dynamic Cyber Defense. Major offerings include large-scale intelligence sensing, processing, exploitation and dissemination systems, extremely Large-Scale Data Information Management, Intelligence and Prime Systems Integration, Knowledge Discovery Processes, ISR/Communications Quick Reaction Capability Solutions, Sensor Systems, Support to Special Operations, Cyber-SIGINT Mission Management/Multi-Intelligence, Language Services/Intelligence Analysis, Cyber Exploitation, Satellite Ground Stations, Weather Services, Geospatial Systems, Product Generation and Dissemination, Counter Narco-Terrorism, Drug Enforcement Operations, Geo-Intelligence Tradecraft Training, Enterprise Information Technology, Ground-Based Sensing, Studies and Analysis, Sustainment, Operations and Maintenance.

*Civil Systems* – provides specialized information systems and services in support of critical civilian government missions, such as homeland security, health, cybersecurity, civil financial, law enforcement and public safety. Primary customers are federal civilian agencies with some state and local and international customers. Civil Systems develops and implements solutions that combine a deep understanding of civil government domains with core expertise in prime systems integration, enterprise applications development, and high value information technology service including cybersecurity, advanced networking and cloud computing.

### **TECHNICAL SERVICES**

Technical Services, headquartered in Herndon, Virginia, is a provider of logistics, infrastructure, and sustainment support, while also providing an array of modernization, high technology, and training and simulation services. The segment consists of three business areas: Defense and Government Services; Training Solutions; and Integrated Logistics and Modernization.

*Defense and Government Services* – provides maintenance, repair, and overhaul (MRO) of combat vehicles, engineering and high technology services for nuclear security and space missions, civil engineering work, military range work, launch services, and range-sensor-instrumentation operations. The division’s customer base includes the U.S. Army, Department of Energy, the DoD, NASA, and the intelligence community.

*Training Solutions* – provides realistic and comprehensive training to senior military leaders, international and peacekeeping forces. The division designs and develops future conflict training scenarios, and provides warfighters and allies with live, virtual, and constructive training programs. The division has supported the training of America’s senior battlefield commanders for every major contingency beginning with Gulf War I through Operation Iraqi Freedom. The division offers diverse training applications ranging from battle command to professional military education. Primary customers include the DoD, Department of State, and Department of Homeland Security.

*Integrated Logistics and Modernization* – provides complete life cycle product and weapon system sustainment and modernization. The division is focused on providing direct support to warfighters and delivering aircraft MRO;



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subsystem MRO and modernization; supply chain management services, warehousing and inventory transportation, field services and mobilization, sustaining engineering, maintenance, repair and overhaul supplies, and on-going weapons maintenance and technical assistance. The division specializes in quick reaction capability and deployed operations in support of customers. Primary customers include the DoD, as well as international military and commercial customers.

**Corporate**

Our principal executive offices are located at 2980 Fairview Park Drive, Falls Church, Virginia 22042. Our telephone number is (703) 280-2900 and our home page on the Internet is [www.northropgrumman.com](http://www.northropgrumman.com). References to our website in this report are provided as a convenience and do not constitute, and should not be viewed as, incorporation by reference of the information contained on, or available through, the website. Such information should not be considered part of this report.

**SELECTED FINANCIAL DATA AND SUMMARY SEGMENT FINANCIAL DATA**

For a more complete understanding of our business, see Selected Financial Data in Part II, Item 6. For a more complete understanding of our segment financial information, see Segment Operating Results in Part II, Item 7, and Note 7 to the consolidated financial statements in Part II, Item 8.

**CUSTOMERS AND REVENUE CONCENTRATION**

Our primary customer is the U.S. Government. Revenue from the U.S. Government (which includes Foreign Military Sales – a method to sell U.S. defense equipment, services and training to foreign governments through the DoD) accounted for more than 90 percent of total revenues in each of 2011, 2010, and 2009. No single product or service accounted for more than ten percent of total revenue during any period presented. See Risk Factors in Part I, Item 1A.

**PATENTS**

The following table summarizes the number of patents we own or have pending as of December 31, 2011:

	Owned	Pending	Total
U.S. patents	2,941	311	<b>3,252</b>
Foreign patents	2,181	517	<b>2,698</b>
Total	5,122	828	<b>5,950</b>

Patents developed while under contract with the U.S. Government may be subject to use by the U.S. Government. We license intellectual property to, and from, third parties. We believe our ability to conduct operations would not be materially affected by the loss of any particular intellectual property right. See Risk Factors in Part I, Item 1A.

**SEASONALITY**

No material portion of our business is considered to be seasonal. Our revenue recognition timing is based on several factors, including the timing of contract awards, the incurrence of contract costs, cost estimation, and in some cases unit deliveries. See Critical Accounting Policies, Estimates, and Judgments – Revenue Recognition in Part II, Item 7.

**BACKLOG**

Total backlog includes both funded backlog (firm orders for which funding is contractually obligated by the customer) and unfunded backlog (firm orders for which funding is not currently contractually obligated by the customer). Unexercised contract options and unfunded indefinite delivery indefinite quantity (IDIQ) orders (except for authorized task orders, which are included up to the authorized value) are not included in unfunded

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backlog. For multi-year services contracts with non-federal government customers having no stated contract values, backlog includes only the amounts committed by the customer. Backlog is converted into sales as work is performed or deliveries are made. At December 31, 2011, total backlog was \$39.5 billion, compared with \$46.8 billion at the end of 2010, and includes a \$3 billion adjustment for a change in the company's backlog measurement criteria, which acknowledges, in our judgment, the reduced likelihood of amounts remaining on certain open, but unfulfilled contracts, being realized as future sales. Approximately 59 percent of backlog at December 31, 2011, is expected to be converted into sales in 2012. For backlog by segment, see Backlog in Part II, Item 7.

**RAW MATERIALS**

While we have generally been able to obtain key raw materials required in our production processes in a timely manner, a significant delay in supply deliveries could have a material adverse effect on the company's consolidated financial position, results of operations, or cash flows. See Risk Factors in Part I, Item 1A and Overview – Outlook in Part II, Item 7.

**GOVERNMENT CONTRACT REGULATION**

Our businesses are affected by numerous laws and regulations, including those relating to the award, administration and performance of U.S. Government contracts. See Risk Factors in Part I, Item 1A.

The U.S. Government generally has the ability to terminate our contracts, in whole or in part, without prior notice, for convenience or for default based on performance. If a U.S. Government contract were to be terminated for convenience, we would generally be protected by provisions covering reimbursement for costs incurred on the contracts and profit on those costs, but not the anticipated profit that would have been earned had the contract been completed. In the unusual circumstance where a U.S. Government contract does not have such termination protection, we attempt to mitigate the termination risk through other means. Termination resulting from our default may expose us to liability and could have a material adverse effect on our ability to compete for other contracts. See Risk Factors in Part I, Item 1A.

Certain programs with the U.S. Government that are prohibited by the customer from being publicly discussed in detail are referred to as "restricted" in this Form 10-K. The consolidated financial statements and financial information in this Form 10-K reflect the operating results of restricted programs under accounting principles generally accepted in the United States of America (GAAP).

**RESEARCH AND DEVELOPMENT**

Our research and development activities primarily include independent research and development (IR&D) efforts related to government programs. IR&D expenses are included in general and administrative expenses and are generally allocated to U.S. Government contracts. Company-sponsored IR&D expenses totaled \$543 million, \$580 million, and \$588 million in 2011, 2010, and 2009, respectively. Expenses for research and development sponsored by the customer are charged directly to the related contracts.

**EMPLOYEE RELATIONS**

We believe that we maintain good relations with our 72,500 employees, of which approximately 3,400 are covered by 17 collective bargaining agreements. We negotiated or re-negotiated three of our collective bargaining agreements in 2011 and expect to re-negotiate renewals for nine of our collective bargaining agreements in 2012. These negotiations had no material adverse effect on our results of operations. For risks associated with collective bargaining agreements, see Risk Factors in Part I, Item 1A.

**ENVIRONMENTAL MATTERS**

Our manufacturing operations are subject to and affected by federal, state, foreign, and local laws and regulations relating to the protection of the environment. The estimated cost to complete remediation is accrued when it is probable that the company will incur costs to address environmental impacts at currently or formerly owned or leased operating facilities or at sites where the company has been named a Potentially Responsible Party (PRP) by

## **NORTHROP GRUMMAN CORPORATION**

the Environmental Protection Agency or similarly designated by other environmental agencies. To assess the potential impact on the company's financial statements, management estimates the range of reasonably possible remediation costs that could be incurred by the company, taking into account the facts currently available to the company regarding each site as well as the current state of technology and prior experience. These estimates are reviewed periodically and adjusted to reflect changes in facts and circumstances. As of December 31, 2011, management estimates the range of reasonably possible future costs for environmental remediation is \$294 million to \$752 million. See Risk Factors in Part I, Item 1A.

As of December 31, 2011 and 2010, amounts accrued for probable environmental remediation costs are \$322 million and \$313 million, respectively. We record accruals for environmental cleanup costs in the accounting period in which we believe it becomes probable we have incurred a liability and the costs can be reasonably estimated, based on facts as then understood by us. These accruals do not include any litigation costs, nor do they include amounts recorded as asset retirement obligations. We record insurance recoveries only when we determine that collection is probable. A portion of the environmental remediation costs is expected to be recoverable through overhead charges on government contracts and, accordingly, such amounts are deferred in inventoried costs (current portion) and miscellaneous other assets (non-current portion) in the consolidated statements of financial position. As of December 31, 2011 and 2010, deferred environmental remediation costs totaled \$191 million and \$185 million, respectively.

Factors that could result in changes to the company's estimates include, but are not limited to: modification of planned remedial actions, increases or decreases in the estimated time required to remediate, changes to the determination of responsible parties and their ability to pay, changes in the level of estimated contamination, changes in laws and regulations affecting remediation requirements, improvements in remediation technology and changes in estimated amounts recoverable through overhead charges on government contracts. In addition, there are some potential remediation sites where the costs of remediation cannot be reasonably estimated. Although management cannot predict whether new information gained as projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's consolidated financial position, results of operations or cash flows.

We could be affected by future laws or regulations, including but not limited to, those enacted in response to climate change concerns and other actions known as "green initiatives." In 2009, we established a goal of reducing our greenhouse gas emissions over a five-year period through December 31, 2014. In 2010, we established goals for water usage and solid waste generation. To comply with laws, regulations and green initiatives, including our goals, we have incurred and expect to incur capital and operating costs, but at this time, such costs have not had, and we do not expect that such costs will have, a material adverse effect on our consolidated financial position, results of operations or cash flows.

## **COMPETITIVE CONDITIONS**

We compete with many companies in the U.S. defense industry and the information and services markets for a number of programs, both large and small. In the U.S. defense industry, Lockheed Martin Corporation, The Boeing Company, Raytheon Company, General Dynamics Corporation, L-3 Communications Corporation, SAIC, BAE Systems Inc., EADS, and Finmeccanica SpA are our primary competitors. Intense competition and long operating cycles are both key characteristics of our business and the defense industry. It is common in the defense industry for work on major programs to be shared among a number of companies. A company competing to be a prime contractor may, upon ultimate award of the contract to another competitor, become a subcontractor for the ultimate prime contracting company. It is not unusual to compete for a contract award with a peer company and, simultaneously, perform as a supplier to or a customer of that same competitor on other contracts, or vice versa. The nature of major defense programs, conducted under binding contracts, allows companies that perform well to benefit from a level of program continuity, not frequently found in other industries.

Our success in the competitive defense industry depends upon our ability to develop and market our products and services, as well as our ability to provide the people, technologies, facilities, equipment, and financial capacity

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needed to deliver those products and services affordably and efficiently. Like most of our competitors, we are vertically integrated but also have a high reliance on the supply chain. We must continue to maintain dependable sources for raw materials, fabricated parts, electronic components, and major subassemblies. In this increasingly complex manufacturing and systems integration environment, effective oversight of subcontractors and suppliers is vital to our success.

Similarly, there is intense competition among many companies in the information and services markets, which are generally more labor intensive with highly competitive margin rates and contract performance periods of shorter duration. Competitors in the information and services markets include the defense industry participants mentioned above as well as many other large and small entities with specialized expertise. Our ability to successfully compete in the information and services markets depends on a number of factors. The most important factor is the ability to deploy skilled professionals, many requiring security clearances, at competitive prices across the diverse spectrum of these markets. Accordingly, we have implemented various workforce initiatives to enhance our success in attracting, developing and retaining these skilled professionals in sufficient numbers to maintain or improve our competitive position within these markets.

In both the U.S. defense industry and information and services markets, the federal government has stressed competition and affordability in connection with its future procurement of products and services. This may lead to fewer sole source awards, as well as more emphasis on cost competitiveness. In addition, the DoD has announced several initiatives to improve efficiency, refocus priorities, modify contract terms, and enhance DoD best practices including those used to procure goods and services from defense contractors. See Overview and the Economic Opportunities, Challenges, and Risks sections in Part II, Item 7, as well as Risk Factors in Part I, Item 1A. These initiatives, when implemented, together with planned reductions in defense spending levels, are likely to result in fewer new opportunities for our industry as a whole with more demanding terms. A reduced opportunity set is likely to intensify competition within the industry as companies compete for a more limited set of new programs.

### **EXECUTIVE OFFICERS**

See Part III, Item 10, for information about our executive officers.

### **AVAILABLE INFORMATION**

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and proxy statement for the annual shareholders' meeting, as well as any amendments to those reports, are available free of charge through our website as soon as reasonably practicable after we file them with the SEC. You can learn more about us by reviewing our SEC filings on the investor relations page of our web site at [www.northropgrumman.com](http://www.northropgrumman.com).

The SEC also maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements and other information about SEC registrants, including Northrop Grumman. You may also obtain these materials at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You can obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

References to our website and the SEC's website in this report are provided as a convenience and do not constitute, and should not be viewed as, incorporation by reference of the information contained on, or available through, such websites.

### **Item 1A. Risk Factors**

Our consolidated financial position, results of operations and cash flows are subject to various risks, many of which are not exclusively within our control, that may cause actual performance to differ materially from historical or projected future performance. We urge you to carefully consider the risk factors described below in evaluating the information contained in this report.

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- ***We depend heavily on a single customer, the U.S. Government, for a substantial portion of our business. Changes in this customer's priorities and changes affecting its ability to do business with us could have a material adverse effect on our financial position, results of operations, or cash flows.***

Our primary customer is the U.S. Government, from which we derived more than 90 percent of our total revenues during each of the past several years. The federal government is implementing significant changes and reductions to government spending and other programs. We cannot predict the impact on existing, follow-on or replacement programs from potential changes in priorities due to changes in defense spending levels, military transformation and planning, and/or changes in social-political priorities. A shift in government priorities to programs in which we do not participate and/or reductions in funding for or the termination of programs in which we do participate, unless offset by other programs and opportunities, could have a material adverse effect on our financial position, results of operations, or cash flows. In addition, we believe uncertainty and other concerns resulting from previously announced proposed defense spending reductions and potential additional reductions, including under the Budget Control Act of 2011 (the Budget Control Act), have impacted and are likely to continue to impact the manner in which our U.S. Government customers manage programs and/or make procurement decisions, resulting in delays and reductions in payments and procurements. Similar challenges and uncertainty faced by some of our international government customers could also lead to delays and/or reductions.

In addition, the U.S. Government generally has the ability to terminate contracts, in whole or in part, without prior notice, for its convenience or for default based on performance. In the event of termination for the U.S. Government's convenience, contractors are generally protected by provisions covering reimbursement for costs incurred on the contracts and profit on those costs but not the anticipated profit that would have been earned had the contract been completed. In some circumstances, however, a U.S. government contract does not have such termination protection. In those cases, we attempt to mitigate the termination risk through other means. To the extent such means are unavailable or do not fully address the costs incurred or profit on those costs, we could face significant losses from the termination for convenience of a contract that lacks termination protection. Termination by the U.S. Government of a contract for convenience could also result in the cancellation of future work on that program. Termination by the U.S. Government of a contract due to our default could require us to pay for re-procurement costs in excess of the original contract price, net of the value of work accepted from the original contract, as well as other damages. Termination of a contract due to our default may expose us to material liability and could have a material adverse effect on our ability to compete for other contracts.

- ***Significant delays or reductions in appropriations for our programs and federal government funding more broadly may negatively impact our business and programs and could have a material adverse effect on our financial position, results of operations or cash flows.***

The funding of U.S. Government programs is subject to an annual congressional budget authorization and appropriation processes. For many programs, Congress appropriates funds on a fiscal year basis even though the program performance period may extend typically several years. Consequently, programs are often partially funded initially and additional funds are committed only as Congress makes further appropriations. If we incur costs in excess of funds committed on a contract, we may be at risk for reimbursement of those costs until additional funds are appropriated. We cannot predict the extent to which total funding and/or funding for individual programs will be included, increased or reduced as part of the annual budget process ultimately approved by Congress or in separate supplemental appropriations or continuing resolutions, as applicable. The impact, severity and duration of the current U.S. economic situation and economic plans adopted or to be adopted by the U.S. Government, along with pressures on, and uncertainty surrounding, the federal budget, could adversely affect the funding for individual programs and delay purchasing or payment decisions by our customers. In the event that government funding for any of our programs becomes unavailable, or is reduced or delayed, our contract or subcontract under such program may be terminated or adjusted by the U.S. Government or the prime contractor, which could have a material adverse effect on our financial position, results of operations, and/or cash flows.

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In August 2011, Congress enacted the Budget Control Act which, while raising the existing statutory limit on the amount of permissible federal debt, also committed the U.S. Government to significantly reducing the federal deficit over ten years. The Budget Control Act established caps on discretionary spending through 2021, reducing federal spending by approximately \$940 billion relative to the fiscal year 2012 Presidential Budget submission. It also established a Joint Committee of Congress (the Joint Committee) that was responsible for identifying an additional \$1.2 to \$1.5 trillion in deficit reductions by November 23, 2011. The Joint Committee was unable to identify the additional deficit reductions by this deadline thereby triggering a second provision of the Budget Control Act called “sequestration,” which calls for very substantial automatic spending cuts split between defense and non-defense programs scheduled to start in 2013 and continue over a nine-year period. While we believe efforts may be underway to prevent the automatic spending cuts scheduled to begin in 2013, the outcome of these efforts is uncertain, and we are unable to predict the impact that either identified or automatic cuts would have on funding for our individual programs. Long-term funding for certain programs in which we participate is likely to be reduced, delayed or cancelled. In addition, these cuts could adversely affect the viability of the suppliers and subcontractors under our programs. While we believe that our business is well-positioned in areas that the DoD has indicated are areas of focus for future defense spending, the impact of the Budget Control Act remains uncertain and our business and industry could be materially adversely affected. In January 2012, the Secretary of Defense announced a number of program changes and cancellations that are scheduled to take place over the next several years, in part to comply with certain provisions of the Budget Control Act. Certain of these program changes and cancellations are expected to have an impact on programs in which we participate.

■ ***As a U.S. Government contractor, we are subject to various procurement regulations and could be adversely affected by changes in regulations or any negative findings from a U.S. Government audit or investigation.***

U.S. Government contractors must comply with many significant procurement regulations and other requirements. These regulations and requirements, although customary in government contracts, increase our performance and compliance costs. New regulations or procurement requirements (including, for example, regarding counterfeit parts) or changes to current ones, could increase our costs and risks of compliance and reduce our margins.

We operate in a highly regulated environment and are routinely audited and reviewed by the U.S. Government and its agencies, such as the Defense Contract Audit Agency (DCAA) and Defense Contract Management Agency (DCMA). These agencies review performance under our contracts, our cost structure and our compliance with applicable laws, regulations and standards, as well as the adequacy of, and our compliance with, our internal control systems and policies. Systems that are subject to review include, but are not limited to, our accounting systems, purchasing systems, billing systems, property management and control systems, cost estimating systems, compensation systems and management information systems. Any costs ultimately found to be unallowable or improperly allocated to a specific contract will not be reimbursed or must be refunded if already reimbursed. If an audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties, sanctions or suspension or debarment from doing business with the U.S. Government. Whether or not illegal activities are alleged, the U.S. Government also has the ability to decrease or withhold certain payments when it deems systems subject to its review to be inadequate. In addition, we could suffer serious reputational harm if allegations of impropriety were made against us. If such actions were to result in suspension or debarment, this could have a material adverse effect on our business.

The U.S. Government, from time to time, recommends to its contractors that certain contract prices be reduced, or that costs allocated to certain contracts be disallowed. These recommendations can involve substantial amounts. In the past, as a result of such audits and other investigations and inquiries, we have on occasion reduced our contract prices and the costs allocated to our government contracts.

We are also, from time to time, subject to U.S. Government investigations relating to our operations, and we are subject to or expected to perform in compliance with a vast array of federal laws, including but not limited to the Truth in Negotiations Act, the False Claims Act, the Procurement Integrity Act, Cost Accounting

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Standards, Federal Acquisition Regulation (FAR), the International Traffic in Arms Regulations promulgated under the Arms Export Control Act, the Close the Contractor Fraud Loophole Act and the Foreign Corrupt Practices Act. If we are found to have violated the law, or are found not to have acted responsibly as defined by the law, we may be subject to reductions of the value of contracts, contract modifications or termination and the assessment of penalties, fines, or compensatory or treble damages, which could have a material adverse effect on our financial position, results of operations, or cash flows. Such matters could also result in suspension or debarment. Given our dependence on government contracting and authorizations, suspension or debarment could have a material adverse effect on our financial position, results of operations, or cash flows.

■ ***Changes to business practices for U.S. government contractors could have a significant adverse effect on current programs, potential new awards and the processes by which procurements are awarded and managed.***

Our industry has experienced, and we expect it will continue to experience, significant changes to business practices as a result of an increased focus on affordability, efficiencies, and recovery of costs, among other items, and a reprioritization of available defense funds to key areas for future defense spending. For example, the DoD's Better Buying Power Initiative is designed to reduce costs, gain efficiencies, refocus priorities and enhance business practices used by the DoD, including those used to procure goods, services and solutions from defense contractors. In addition, the DCAA has implemented cost recovery initiatives designed to prioritize efforts to recover costs and close open audits. More recently, the thresholds for certain allowable costs are being challenged and refined.

These new initiatives have had, and we expect them to continue to have, a significant impact on the contracting environment in which we do business. In support of the implementation of the Better Buying Power initiative, the U.S. Government is issuing a large number of new regulations and statutory requirements which are shifting additional responsibility and performance risks to the contractor. This is also being accomplished by the Government's increased reliance on the use of fixed price incentive contracts with specifically identified fee share line structures rather than cost type or fixed price contracts. While the full impact to our business as a result of these changes remains uncertain, and subject to the manner in which they are implemented, our business and industry could be materially adversely affected.

■ ***Competition within our markets and an increase in bid protests may reduce our revenues and market share.***

We operate in highly competitive markets and our competitors may have more extensive or more specialized engineering, manufacturing and marketing capabilities or be able to assume lower costs than we do in some areas or programs. We have seen, and anticipate that we will continue to see, increased competition in some of our core markets, especially as a result of the reduction in budgets for many U.S. Government agencies and fewer new program starts. In addition, as discussed in more detail above, projected U.S. defense spending levels for periods beyond the near-term are uncertain and difficult to predict. Changes in U.S. defense spending may limit certain future market opportunities. We are also facing increasing competition in our domestic and international markets from foreign and multinational firms. Additionally, some customers, including the DoD, may turn to commercial contractors, rather than traditional defense contractors, for information technology and other support work. If we are unable to continue to compete successfully against our current or future competitors, we may experience declines in revenues and market share, which could negatively impact our financial position, results of operations, or cash flows.

We are also experiencing an increasing number of bid protests from unsuccessful bidders on new program awards. Bid protests could result in the award decision being overturned, and a re-bid of the contract. Even where a bid protest does not result in a new award, the resolution can extend the time until the contract activity can begin, and delay potential earnings.

■ ***Our future success depends, in part, on our ability to develop new products and new technologies and maintain technologies, facilities, equipment and a qualified workforce to meet the needs of current and future customers.***

Many of the markets in which we operate are characterized by rapidly changing technologies. The product, program and service needs of our customers change and evolve regularly. Our success in the competitive

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defense industry depends upon our ability to develop and market our products and services, as well as our ability to provide the people, technologies, facilities, equipment and financial capacity needed to deliver those products and services with maximum efficiency. If we fail to maintain our competitive position, we could lose a significant amount of future business to our competitors, which would have a material adverse effect on our ability to generate favorable financial results and maintain market share.

Our operating results are heavily dependent upon our ability to attract and retain sufficient personnel with requisite skills and/or security clearances. If qualified personnel become scarce, we could experience higher labor, recruiting or training costs in order to attract and retain such employees. Failure to maintain a qualified workforce could result in difficulty in performing under our contracts.

Approximately 3,400 of our 72,500 employees are covered by an aggregate of 17 collective bargaining agreements, and we expect to negotiate or re-negotiate renewals for nine of our collective bargaining agreements in 2012. Collective bargaining agreements generally expire after three to five years, and are subject to renegotiation upon expiration. We may experience difficulties with renewals and renegotiations of existing collective bargaining agreements. If we experience such difficulties, we could incur additional expenses and may be subject to work stoppages. Any such expenses or delays could adversely affect programs served by employees who are covered by collective bargaining agreements.

- ***Many of our contracts contain performance obligations that require innovative design capabilities, are technologically complex, require state-of-the-art manufacturing expertise or are dependent upon factors not wholly within our control. Failure to meet these obligations could adversely affect our profitability and future prospects.***

We design, develop and manufacture technologically advanced and innovative products and services, which are applied by our customers in a variety of environments. Problems and delays in development or delivery as a result of issues with respect to design, technology, licensing and patent rights, labor, learning curve assumptions, manufacturing materials or components could prevent us from achieving contractual requirements.

In addition, our products cannot be tested and proven in all situations and are otherwise subject to unforeseen problems. Examples of unforeseen problems that could negatively affect revenue and profitability include loss on launch of spacecraft, premature failure of products that cannot be accessed for repair or replacement, problems with quality and workmanship, country of origin, delivery of subcontractor components or services and degradation of product performance. These failures could result, either directly or indirectly, in loss of life or property. Among the factors that may affect revenue and profits could be unforeseen costs and expenses not covered by insurance or indemnification from the customer, diversion of management focus in responding to unforeseen problems, loss of follow-on work, and, in the case of certain contracts, repayment to the government customer of contract cost and fee payments we previously received.

Certain contracts, primarily involving space satellite systems, contain provisions that entitle the customer to recover fees in the event of partial or complete failure of the system upon launch or subsequent deployment for less than a specified period of time. Under such terms, we could be required to forfeit fees previously recognized and/or collected. We have not experienced any material losses in the last decade in connection with such contract performance incentive provisions. However, if we were to experience launch failures or complete satellite system failures in the future, for example, such events could have a material adverse effect on our financial position, results of operations, or cash flows.

- ***Contract cost growth on fixed-price and other contracts that cannot be justified as an increase in contract value due from customers exposes us to reduced profitability and the potential loss of future business.***

Our operating income is adversely affected when we incur certain contract costs or certain increases in contract costs that cannot be billed to customers. This cost growth can occur if estimates to complete increase due to a variety of reasons including: technical challenges; manufacturing difficulties or delays; or workforce-related issues; and where initial estimates used for calculating the contract cost were incorrect. The cost



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estimation process requires significant judgment and expertise. Reasons for cost growth may include unavailability or reduced productivity of labor, the nature and complexity of the work to be performed, the timelines and availability of materials, major subcontractor performance and quality of their products, the effect of any delays in performance, availability and timing of funding from the customer, natural disasters, and the inability to recover any claims included in the estimates to complete, including additional pension-related costs that may arise from the new rule published by the Cost Accounting Standards (CAS) Board discussed further in the pension and medical expenses risk factor below. A significant change in cost estimates on one or more programs could have a material adverse effect on our consolidated financial position, results of operations or cash flows.

Our risk varies with the type of contract. Flexibly priced contracts include both cost-type and fixed-price incentive contracts. Due to their nature, firm fixed-price contracts inherently have more risk than flexibly priced contracts. In 2011, approximately 41 percent of our annual revenues were derived from firm fixed-price contracts. We typically enter into firm fixed-price contracts where costs can be reasonably estimated based on experience. In addition, our contracts contain provisions relating to cost controls and audit rights. Should the terms specified in our contracts not be met, then profitability may be reduced. Fixed-price development work comprises a small portion of our firm fixed-price contracts and inherently has more uncertainty as to future events than production contracts and therefore more variability in estimates of the costs to complete the development stage. As work progresses through the development stage into production, the risks associated with estimating the total costs of the contract are generally reduced. In addition, successful performance of firm fixed-price development contracts that include production units is subject to our ability to control some cost growth in meeting production specifications and delivery rates. While management uses its best judgment to estimate costs associated with fixed-price development contracts, future events could result in either upward or downward adjustments to those estimates.

Under a typical fixed-price incentive contract, the allowable costs incurred by the contractor are subject to reimbursement, but are subject to a cost-share limit, which affects profitability. Under a cost-type contract, the allowable costs incurred by the contractor are also subject to reimbursement plus a fee that represents profit. We typically enter into cost-type contracts for development programs with complex design and technical challenges. These cost-type programs typically have award or incentive fees that are subject to uncertainty and may be earned over extended periods. In these cases, the associated financial risks are primarily in lower profit rates or program cancellation if cost, schedule, or technical performance issues arise.

■ ***We use estimates when accounting for contracts. Changes in estimates could affect our profitability and our overall financial position.***

When agreeing to contractual terms, our management makes assumptions and projections about future conditions and events, many of which extend over long periods. These projections assess the productivity and availability of labor, complexity of the work to be performed, cost and availability of materials, impact of delayed performance and timing of product deliveries. Contract accounting requires judgment relative to assessing risks, estimating contract revenues and costs, and making assumptions for schedule and technical issues. Due to the size and nature of many of our contracts, the estimation of total revenues and costs at completion is complicated and subject to many variables. For example, assumptions are made regarding the length of time to complete a contract since costs also include expected increases in wages, prices for materials and allocated fixed costs. Similarly, assumptions are made regarding the future impact of our efficiency initiatives and cost reduction efforts. Incentives, awards or penalties related to performance on contracts are considered in estimating revenue and profit rates, and are recorded when there is sufficient information to assess anticipated performance. Suppliers' assertions are also assessed and considered in estimating costs and profit rates.

Because of the significance of the judgment and estimation processes described above, it is possible that materially different amounts could be obtained if different assumptions were used or if the underlying

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circumstances were to change. Changes in underlying assumptions, circumstances or estimates may have a material adverse effect upon the profitability of one or more of the affected contracts, future period financial reporting and performance. See Critical Accounting Policies, Estimates, and Judgments in Part II, Item 7.

■ ***Our earnings and margins depend, in part, on subcontractor performance as well as raw material and component availability and pricing.***

We rely on other companies to provide raw materials and major components for our products and rely on subcontractors to produce hardware elements and sub-assemblies and perform some of the services that we provide to our customers. Disruptions or performance problems caused by our subcontractors and vendors could have an adverse effect on our ability to meet our commitments to customers. Our ability to perform our obligations on time as a prime contractor could be adversely affected if one or more of the vendors or subcontractors are unable to provide the agreed-upon products or materials or perform the agreed-upon services in a timely and cost-effective manner.

Our costs may increase over the term of our contracts. Through cost escalation provisions contained in some of our U.S. Government contracts, we may be protected from increases in material costs to the extent that the increases in our costs are in line with industry indices. However, the difference in basis between our actual material costs and these indices may expose us to cost uncertainty even with these provisions. A significant delay in supply deliveries of our key raw materials required in our production processes could have a material adverse effect on our financial position, results of operations, or cash flows.

In connection with our government contracts, we are required to procure certain materials, components and parts from supply sources approved by the U.S. Government. Consistent with the industry's efforts, our procurement practices are intended to reduce the likelihood of our procurement of counterfeit parts or materials. There are currently several components, for which there may only be one supplier. The inability of a sole source supplier to meet our needs or the appearance of counterfeit parts could have a material adverse effect on our financial position, results of operations, or cash flows.

Changes in economic conditions, as well as changes in the defense budget, can adversely affect the ability of our subcontractors and suppliers to perform and further increase this risk.

■ ***Changes in future business conditions could cause business investments and/or recorded goodwill and other intangible assets to become impaired, resulting in substantial losses and write-downs that would reduce our operating income.***

Goodwill accounts for approximately half of our recorded total assets. We evaluate goodwill amounts for impairment at least annually or more often when we believe potential impairment exists. The annual impairment test is based on several factors requiring judgment. A significant decrease in expected cash flows or changes in market conditions may indicate potential impairment of recorded goodwill. We continue to monitor the recoverability of the carrying value of our goodwill and other long-lived assets.

As part of our overall strategy, we may, from time to time, acquire a minority or majority interest in a business. Even after careful integration efforts, actual operating results may vary significantly from initial estimates and we may experience unforeseen issues that adversely affect the value of our goodwill or intangible assets.

■ ***Our international business exposes us to additional risks.***

While our international business is not substantial, it remains subject to numerous U.S. and foreign laws and regulations, including, without limitation, regulations relating to import-export control, technology transfer restrictions, repatriation of earnings, exchange controls, the Foreign Corrupt Practices Act and other anti-corruption laws, and the anti-boycott provisions of the U.S. Export Administration Act. Failure by us, our employees, or others working on our behalf to comply with these laws and regulations could result in administrative, civil, or criminal liabilities, including suspension or debarment from government contracts or

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suspension of our export privileges, which could have a material adverse effect on us. Changes in regulation or political environment may affect our ability to conduct business in foreign markets, including those regarding investment, procurement and repatriation of earnings. Our international business may also be impacted by changes in foreign national priorities and government budgets and may be further impacted by global economic conditions and fluctuations in foreign currency exchange rates. In addition, our international contracts may include industrial cooperation agreements requiring specific in-country purchases, investments, manufacturing agreements or other financial obligations, known as offset obligations, and provide for penalties if we fail to meet such requirements.

The services and products we provide internationally, including those provided by subcontractors, are sometimes in countries with unstable governments, in areas of military conflict or at military installations. This increases the risk of an incident resulting in harm or loss of life to our employees, subcontractors or other third parties or damage to our products. We maintain insurance and take other steps to mitigate the risk and potential liabilities related to our international operations, but these steps may not be adequate to prevent loss or to cover resulting claims and liabilities, and we may be forced to bear substantial costs (see additional discussion of possible inadequacy of our insurance coverage below). In addition, any accidents or incidents that occur in connection with our international operations could result in negative publicity for the company, which may adversely affect our reputation and make it more difficult for us to compete for future contracts or attract and retain employees or result in the loss of existing and future contracts. The impact of these factors is difficult to predict, but one or more of them could adversely affect our financial position, results of operations, or cash flows.

■ ***Our reputation and our ability to do business may be impacted by the improper conduct of employees, agents or business partners.***

We have implemented extensive policies, procedures, training and other compliance controls to prevent misconduct by employees, agents or others with whom we are doing business that would violate the applicable laws of the jurisdictions in which we operate, including laws governing improper payments to government officials, the protection of export controlled or classified information, cost accounting and billing, competition and data privacy. However, we cannot ensure that we will prevent all such misconduct committed by our employees, agents or others with whom we are doing business. Such improper actions could subject us to administrative, civil or criminal investigations and monetary and non-monetary penalties, including suspension and debarment, that could negatively impact our reputation and ability to conduct business and could have a material adverse effect on our financial position, results of operations or cash flows.

■ ***Our business could be negatively impacted by security threats, including physical and cybersecurity threats, and other disruptions.***

As a defense contractor, we face various security threats, including cybersecurity threats to gain unauthorized access to sensitive information; threats to the safety of our directors, officers, and employees; threats to the security of our facilities and infrastructure; and threats from terrorist acts. Although we utilize various procedures and controls to monitor and mitigate these threats, there can be no assurance that these procedures and controls will be sufficient to prevent security threats from materializing. If any of these events were to materialize, they could lead to losses of sensitive information or capabilities, harm to personnel or infrastructure, or damage to our reputation, and could have a material adverse effect on our financial position, results of operations, or cash flows.

Cybersecurity threats are evolving and include, but are not limited to, malicious software, attempts to gain unauthorized access to data, and other electronic security breaches that could lead to disruptions in mission critical systems, unauthorized release of confidential or otherwise protected information and corruption of data. These events could damage our reputation and lead to financial losses from remedial actions, loss of business or potential liability.

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We also manage information technology systems for various customers and other third parties. While we operate under information security policies and procedures for managing these systems, we generally face similar cybersecurity threats for these systems as for our own.

■ ***Unforeseen environmental costs could have a material adverse effect on our financial position, results of operations, or cash flows.***

Our operations are subject to and affected by a variety of federal, state, local and foreign environmental laws and regulations. In addition, we could be affected by future laws or regulations, including those imposed in response to climate change concerns and other actions commonly referred to as “green initiatives.” Compliance with current and future environmental laws and regulations currently requires and is expected to continue to require significant operating and capital costs.

Environmental laws and regulations provide for substantial fines and criminal sanctions for violations, and may limit our operations or require the installation of costly pollution control equipment or operational changes to limit pollution emissions or discharges and/or decrease the likelihood of accidental hazardous substance releases. We also incur, and expect to continue to incur, costs to comply with current federal and state environmental laws and regulations related to the cleanup of pollutants previously released into the environment. In addition, if we were found to be in violation of the Federal Clean Air Act or the Clean Water Act, the facility or facilities involved in the violation could be placed by the EPA on the “Excluded Parties List” maintained by the General Services Administration. The listing could continue until the EPA concludes that the cause of the violation had been corrected. If we were listed on the Excluded Parties List it could have a material adverse effect on our financial position, results of operations and cash flows. Listed facilities generally cannot be used in performing any U.S. Government contract until the violation is corrected.

The adoption of new laws and regulations, stricter enforcement of existing laws and regulations, imposition of new cleanup requirements, discovery of previously unknown or more extensive contamination, litigation involving environmental impacts, sanctions or penalties, could negatively impact our ability to recover such costs under previously priced contracts or financial insolvency of other responsible parties could cause us to incur costs in the future that could have a material adverse effect on our financial position, results of operations, or cash flows.

■ ***We are subject to various claims and litigation that could ultimately be resolved against us.***

The size, type and complexity of our business make us highly susceptible to claims and litigation. We are and may become subject to various environmental claims, income tax matters, compliance matters, claims, investigations, and administrative, civil or criminal litigation, which could divert financial and management resources and, could lead to fines, penalties, judgements, and other monetary and non-monetary results, including suspension or debarment, and could have a material adverse effect on our financial position, results of operations or cash flows. Any investigation, claim, or litigation, even if fully indemnified or insured, could negatively impact our reputation among our customers and the public, and make it more difficult for us to compete effectively or obtain adequate insurance in the future.

■ ***We may be unable adequately to protect our intellectual property rights, which could affect our ability to compete.***

We own many U.S. and foreign patents, trademarks, copyrights, and other forms of intellectual property. The U.S. Government has certain rights to use certain intellectual property that we develop in performance of government contracts, and it may use or authorize others to use certain such intellectual property. Our intellectual property is subject to challenge, invalidation, misappropriation or circumvention by third parties.

We also rely significantly upon proprietary technology, information, processes and know-how that are not protected by patents. We seek to protect this information through trade secret or confidentiality agreements with our employees, consultants, subcontractors and other parties, as well as through other measures. These agreements and other measures may not provide adequate protection for our unpatented proprietary

## NORTHROP GRUMMAN CORPORATION

information. In the event of an infringement of our intellectual property rights, a breach of a confidentiality agreement or divulgence of proprietary information, we may not have adequate legal remedies to maintain our intellectual property. Litigation to determine the scope of intellectual property rights, even if ultimately successful, could be costly and could divert management's attention away from other aspects of our business. In addition, our trade secrets may otherwise become known or be independently developed by competitors. In some instances, we have licensed the proprietary intellectual property of others, but we may be unable in the future to secure the necessary licenses to use such intellectual property on commercially reasonable terms. If we are unable adequately to protect our intellectual property rights, our business could be adversely affected.

■ ***Our business is subject to disruption caused by natural disasters, environmental disasters and other factors that could adversely affect our profitability and our overall financial position.***

We have significant operations located in regions of the U.S. that may be exposed to earthquakes, damaging storms, and other natural disasters, including environmental disasters. Although preventative measures may help to mitigate damage, the damage and disruption resulting from natural and environmental disasters may be significant. If insurance or other risk transfer mechanisms are unavailable or insufficient to recover all costs, our financial position, results of operations, or cash flows could be materially adversely affected.

Our suppliers and subcontractors are also subject to natural disasters that could affect their ability to deliver or perform under a contract. Performance failures by our subcontractors due to natural and environmental disasters may adversely affect our ability to perform our obligations on the prime contract. This could reduce our profitability due to damages or other costs that may not be fully recoverable from the subcontractor or from the customer, could result in a termination of the prime contract and could have an adverse effect on our ability to compete for future contracts.

Natural disasters could also disrupt our workforce, electrical and other power distribution networks, including computer and internet operation and accessibility, and the critical industrial infrastructure needed for normal business operations. These disruptions could cause adverse effects on our profitability and performance.

■ ***Our insurance coverage may be inadequate to cover all of our significant risks or our insurers may deny coverage of material losses we incur, which could adversely affect our profitability and overall financial position.***

We endeavor to identify and obtain in established markets insurance agreements to cover significant risks and liabilities (including, for example, natural disasters and product liability). Not every risk or liability can be protected by insurance, and, for insurable risks, the limits of coverage reasonably obtainable in the market may not be sufficient to cover all actual losses or liabilities incurred, including for example, a catastrophic earthquake claim.

Additionally, disputes with insurance carriers over coverage may affect the timing of cash flows and, if litigation with the carrier becomes necessary, an outcome unfavorable to us may have a material adverse effect on our financial position, results of operations, or cash flows.

■ ***Anticipated benefits of mergers, acquisitions, joint ventures, spin-offs or strategic alliances may not be realized.***

As part of our overall strategy, we may, from time to time, merge with or acquire businesses, dispose of or spin-off businesses, form joint ventures or create strategic alliances. Whether we realize the anticipated benefits from these transactions depends, in part, upon the integration between the businesses involved, the performance of the underlying products, capabilities or technologies, the management of the operations and market conditions following these transactions. Accordingly, our financial results could be adversely affected from unanticipated performance issues, transaction-related charges, liabilities, amortization of expenses related to intangibles, charges for impairment of long-term assets, guarantees, partner performance and indemnifications. Divestitures may result in continued financial involvement in the divested business, such as through guarantees, indemnifications, or other financial arrangements, following the transaction. Although we have established procedures and processes to mitigate these risks, there is no assurance that these transactions will be successful.

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■ ***Market volatility and adverse capital and credit market conditions may affect our ability to access cost-effective sources of funding and expose us to risks associated with the financial viability of suppliers and the ability of counterparties to perform on financial instruments.***

Domestic and international financial and credit markets have experienced high levels of volatility and disruption, reducing the availability of credit for certain issuers. Historically, we have occasionally accessed these markets to support certain business activities, including acquisitions, capital expansion projects, refinancing existing debt and issuing letters of credit. In the future, we may not be able to obtain capital market financing or bank financing when needed on favorable terms, or at all, which could have a material adverse effect on our financial position, results of operations, or cash flows. We have also executed transactions with counterparties domestically and abroad in the financial services industry, including brokers and dealers, commercial banks, investment banks and other institutional parties. These transactions expose us to potential credit risk in the event of counterparty default.

A tightening of credit could also adversely affect our suppliers' ability to obtain financing. Delays in suppliers' ability to obtain financing, or the unavailability of financing, could cause us to be unable to meet our contract obligations and could adversely affect our financial position, results of operations, or cash flows. The inability of our suppliers to obtain financing could also result in the need for us to transition to alternate suppliers, which could result in significant incremental cost and delay or the need for us to provide other supplemental means to support our existing suppliers.

■ ***Pension and medical expenses associated with our retirement benefit plans may fluctuate significantly depending upon changes in actuarial assumptions, future investment performance of plan assets, future trends in health care costs and legislative or other regulatory actions.***

A substantial portion of our current and retired employee population is covered by pension and post-retirement benefit plans, the costs of which are dependent upon our various assumptions, including estimates of rates of return on benefit related assets, discount rates for future payment obligations, rates of future cost growth and trends for future costs. In addition, funding requirements for benefit obligations of our pension and post-retirement benefit plans are subject to legislative and other government regulatory actions. Variances from these estimates could have a material adverse effect on our financial position, results of operations, or cash flows.

Additionally, due to government regulations, pension plan cost recoveries under our government contracts occur in different periods from when those pension costs are recognized for financial statement purposes or when pension funding is made. These timing differences could have a material adverse effect on our cash flow from operations. On December 27, 2011, the CAS Board published a final rule intended to partially harmonize the measurement and period of assignment of defined benefit pension plan costs allocable to U.S. Government contracts and the minimum required contribution under the Employee Retirement Income Security Act of 1974 (ERISA), as amended by the Pension Protection Act (PPA) of 2006. We anticipate that this rule will better align, but not eliminate, mismatches between ERISA funding requirements and CAS pension costs for U.S. Government CAS covered contracts. The rule becomes effective February 27, 2012, with 2013 being the first year of applicability for the revised accounting practices required by the rule. Price proposals for CAS covered contracts awarded on or after the effective date of February 27, 2012 will reflect the effects of the rule. Although we believe that contractors are entitled to an equitable adjustment on CAS covered contracts awarded prior to the February 27, 2012 effective date, the application of this rule on our financial position, results of operations and cash flows could be materially adversely affected if we are unable to successfully recover such equitable adjustment.

■ ***Unanticipated changes in our tax provisions or exposure to additional income tax liabilities could affect our profitability and cash flow.***

We are subject to income taxes in the U.S. and many foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of business, there are many

## NORTHROP GRUMMAN CORPORATION

transactions and calculations where the ultimate tax determination is uncertain. In addition, timing differences in the recognition of income from contracts for financial statement purposes and for income tax regulations can cause uncertainty with respect to the timing of income tax payments, which can have a significant impact on our cash flow from operations in a particular period. Furthermore, changes in applicable domestic or foreign income tax laws and regulations, or their interpretation, could result in higher or lower income tax rates assessed or changes in the taxability of certain sales or the deductibility of certain expenses, thereby affecting our income tax expense and profitability. The final determination of any tax audits or related litigation could be materially different from our historical income tax provisions and accruals. Additionally, changes in our tax rate as a result of a change in the mix of earnings in countries with differing statutory tax rates, changes in our overall profitability, changes in tax legislation, changes in the valuation of deferred tax assets and liabilities, changes in differences between financial reporting income and taxable income, the results of audits and the examination of previously filed tax returns by taxing authorities and continuing assessments of our tax exposures could impact our tax liabilities and affect our income tax expense, profitability and cash flow.

■ ***Our nuclear-related operations subject us to various environmental, regulatory, financial and other risks.***

Our nuclear-related operations subject us to various risks, including potential liabilities relating to harmful effects on the environment and human health that may result from nuclear-related operations and the storage, handling and disposal of radioactive materials. We are also subject to reputational harm and potential liabilities arising out of a nuclear incident, whether or not it is within our control. The U.S. Government and prime contractors provide certain indemnity protection under certain of our contracts pursuant to, or in connection with, Public Law 85-804 and the Price-Anderson Nuclear Industries Indemnity Act for certain nuclear-related risks. If there was a nuclear incident and that indemnity protection was not available to cover our losses and liabilities, it could have a material adverse effect on our financial position, results of operations, or cash flows.

■ ***If all or any portion of the spin-off of our former Shipbuilding business or certain internal transactions undertaken in anticipation of the spin-off transaction are determined to be taxable for U.S. federal income tax purposes, we and our shareholders that are subject to U.S. federal income tax may incur significant U.S. federal income tax liabilities.***

In connection with the spin-off of our former shipbuilding business, we received a letter ruling from the IRS and an opinion of counsel confirming that we and our shareholders would not recognize any taxable income, gain or loss for U.S. federal income tax purposes as a result of the merger, the internal reorganization or the distribution, except that our shareholders who receive cash in lieu of fractional shares would recognize gain or loss with respect to such cash. The ruling and the opinion relied on certain facts, assumptions, representations and undertakings from us and HII regarding the past and future conduct of the companies' respective businesses and other matters.

We are not aware of any facts or circumstances that would cause any of the factual statements or representations in the IRS ruling or the opinion to be incomplete or untrue at the time of the spin-off transaction. Nevertheless, if the IRS determines that any of the factual statements or representations that the IRS ruling or the opinion was based on were incomplete or untrue, or if certain facts or circumstances upon which the IRS ruling or the opinion was based were materially different from those at the time of the spin-off, we and our shareholders may not be able to rely on the IRS ruling or the opinion of counsel and could be subject to significant tax liabilities.

Even if the spin-off transaction otherwise qualifies as tax-free for U.S. federal income tax purposes, the internal reorganization and distribution may be taxable to us (but not to our shareholders) if certain events occur, including, if within two years following the spin-off there are one or more acquisitions (including issuances) of the stock of either us or HII, representing 50% or more of the then-outstanding stock of either corporation and the acquisition or acquisitions are deemed to be part of a plan or series of related transactions that include the distribution; we cease to engage appropriately in the conduct of a substantial part of our existing business; or, we or HII repurchase shares in excess of specified levels over a two-year period (which substantially exceed

## NORTHROP GRUMMAN CORPORATION

our historical repurchase activity level). If such tax were incurred, the tax liability would be substantial. HII has agreed not to undertake transactions that would reasonably be expected to trigger such tax, and we intend to avoid any such transactions.

■ ***The spin-off of our former Shipbuilding business may expose us to potential claims and liabilities.***

In connection with the spin-off transaction, we entered into a number of agreements with HII setting forth certain rights and obligations of the parties after the separation. For example, under the Separation and Distribution Agreement, from and after the spin-off transaction, each of HII and Northrop Grumman is generally responsible for the debts, liabilities and other obligations related to the business or businesses that it owns and operates following the consummation of the spin-off. It is possible that a court would disregard the allocation agreed to between us and HII, and require that we assume responsibility for certain obligations allocated to HII (for example, tax and/or environmental liabilities), particularly if HII were to refuse or were unable to pay or perform such obligations.

In addition, third parties could seek to hold us responsible for any of the liabilities or obligations for which HII has agreed to be responsible and/or to indemnify us. The indemnity rights we have under our agreements with HII may not be sufficient to protect us against such liabilities. Even if we ultimately succeed in recovering from HII any amounts for which we are held liable, we may be required to record these losses ourselves until such time as the indemnity contribution is paid. In addition, certain indemnities that we may be required to provide HII are not subject to a cap, may be significant, and could negatively impact our business. These risks could negatively affect our business and could have a material adverse effect on our financial position, results of operations or cash flows.

### **Item 1B. Unresolved Staff Comments**

No information is required in response to this item.

## **FORWARD-LOOKING STATEMENTS AND PROJECTIONS**

This Form 10-K and the information we are incorporating by reference contain statements, other than statements of historical fact, that constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “expect,” “intend,” “may,” “could,” “plan,” “project,” “forecast,” “believe,” “estimate,” “outlook,” “anticipate,” “trends” and similar expressions generally identify these forward-looking statements. Forward-looking statements are based upon assumptions, expectations, plans and projections that we believe to be reasonable when made. These statements are not guarantees of future performance and inherently involve a wide range of risks and uncertainties that are difficult to predict. Specific factors that could cause actual results to differ materially from those expressed or implied in the forward-looking statements include, but are not limited to, those identified under Risk Factors in Part I, Item 1A and other important factors disclosed in this report and from time to time in our other filings with the SEC.

You are urged to consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of predictions contained in such forward-looking statements. These forward-looking statements speak only as of the date this report is first filed or, in the case of any document incorporated by reference, the date of that document. We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

### **Item 2. Properties**

At December 31, 2011, we owned or leased approximately 37 million square feet of floor space at approximately 655 separate locations, primarily in the U.S., for manufacturing, warehousing, research and testing, administration and various other uses. At December 31, 2011, we leased to third parties approximately 469,000 square feet of our owned and leased facilities, and had vacant floor space of approximately 403,000 square feet.



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At December 31, 2011, we had major operations at the following locations:

**Aerospace Systems** – Carson, El Segundo, Manhattan Beach, Mojave, Palmdale, Redondo Beach, and San Diego, CA; Melbourne and St. Augustine, FL; Bethpage, NY; and Clearfield, UT.

**Electronic Systems** – Azusa, Sunnyvale and Woodland Hills, CA; Norwalk, CT; Apopka, FL; Rolling Meadows, IL; Annapolis, Elkridge, Linthicum and Sykesville, MD; Williamsville, NY; Cincinnati, OH; Salt Lake City, UT; and Charlottesville, VA. Locations outside the U.S. include United Kingdom, France, Germany, and Italy.

**Information Systems** – Huntsville, AL; Carson, McClellan, Redondo Beach, San Diego, and San Jose, CA; Aurora and Colorado Springs CO; and Annapolis Junction, MD; Bellevue, NE; and Chantilly, Chester, Dahlgren, Fairfax, Herndon, McLean, Reston, and Richmond, VA.

**Technical Services** – Sierra Vista, AZ; Warner Robins, GA; Lake Charles, LA; and Herndon, VA.

**Corporate and other locations** – Falls Church and Lebanon, VA; and Irving, TX.

The following is a summary of our floor space at December 31, 2011:

<i>Square feet (in thousands)</i>	Owned	Leased	U.S. Government Owned/Leased	<b>Total</b>
Aerospace Systems	6,358	5,635	1,914	<b>13,907</b>
Electronic Systems	8,220	3,113		<b>11,333</b>
Information Systems	651	7,461		<b>8,112</b>
Technical Services	128	2,202		<b>2,330</b>
Corporate	746	969		<b>1,715</b>
<b>Total</b>	<b>16,103</b>	<b>19,380</b>	<b>1,914</b>	<b>37,397</b>

We maintain our properties in good operating condition and believe that the productive capacity of our properties is adequate to meet current contractual requirements and those for the foreseeable future.

In the fourth quarter of 2010, we purchased an existing 334,407 square foot building located at 2980 Fairview Park Drive, Falls Church, Virginia, as the new location for our principal executive offices. In August 2011, we relocated our corporate office in Los Angeles, California and corporate employees in Rosslyn, Virginia to our new corporate office in Falls Church, Virginia. We believe this move will enable us to better serve our customers.

**Item 3. Legal Proceedings**

We have provided information about certain legal proceedings in which we are involved in Note 14 to the consolidated financial statements in Part II, Item 8.

As disclosed elsewhere in this report, we completed the spin-off of HII effective as of March 31, 2011, and our former Shipbuilding business is now reported as discontinued operations. As provided in the Separation and Distribution Agreement with HII described in Note 6 of the consolidated financial statements in Part II, Item 8, HII generally is responsible for investigations, claims and litigation matters related to the Shipbuilding business. The company has therefore excluded from this report certain previously disclosed Shipbuilding-related investigations, claims and litigation matters for which HII has lead responsibility.

In addition to the matters specifically disclosed in Note 14, we are a party to various investigations, lawsuits, claims and other legal proceedings, including government investigations and claims, that arise in the ordinary course of our business. These types of matters could result in fines, penalties, compensatory or treble damages or non-monetary relief. U.S. Government regulations also provide that certain allegations against a contractor may lead to suspension or debarment from future U.S. Government contracts or the loss of export privileges for the company or one or more of its components. Suspension or debarment could have a material adverse effect on the

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**NORTHROP GRUMMAN CORPORATION**

company because of the company's reliance on government contracts and authorizations. Based on the information available to us to date, we do not believe that the outcome of any matter pending against the Company, including the matters specifically identified in Note 14, is likely to have a material adverse effect on the company's consolidated financial position as of December 31, 2011 or its annual results of operations or cash flows. For further information on the risks we face from existing and future investigations, lawsuits, claims and other legal proceedings, please see Risk Factors in Part I, Item 1A, of this report.

**Item 4. Mine Safety Disclosures**

Not applicable

**NORTHROP GRUMMAN CORPORATION**

**PART II**

**Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

(a) *Market Information.*

Our common stock is listed on the New York Stock Exchange and trades under symbol NOC.

The following table sets forth, for the periods indicated, the high and low closing sale prices of our common stock as reported in the consolidated reporting system for the New York Stock Exchange Composite Transactions. The stock prices listed in the table below for quarter-end prices prior to March 31, 2011 have not been adjusted for the impact of the Shipbuilding spin-off.

	2011	2010
January to March	\$ 62.71 to \$71.87	\$ 55.63 to \$66.25
April to June	60.42 to 70.33	54.10 to 69.38
July to September	49.24 to 70.00	54.12 to 60.63
October to December	50.87 to 59.45	60.11 to 65.34

(b) *Holder.*

The approximate number of common stockholders was 30,908 as of February 6, 2012.

(c) *Dividends.*

Quarterly dividends per common share for the most recent two years are as follows:

	2011	2010
January to March	\$0.47	\$ 0.43
April to June	0.50	0.47
July to September	0.50	0.47
October to December	0.50	0.47
	<b>\$1.97</b>	<b>\$1.84</b>

**Common Stock**

We have 800,000,000 shares authorized at a \$1 par value per share, of which 253,889,622 shares and 290,956,752 shares were outstanding as of December 31, 2011, and 2010, respectively.

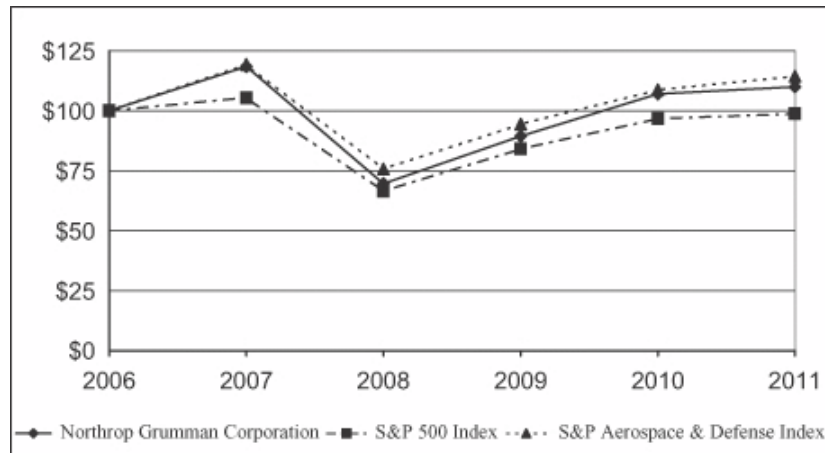
**Preferred Stock**

We have 10,000,000 shares authorized at a \$1 par value per share, of which no shares were issued and outstanding as of December 31, 2011, and 2010.

**NORTHROP GRUMMAN CORPORATION**

(d) *Stock Performance Graph.*

**Comparison of Cumulative Five Year Total Return**  
Among Northrop Grumman Corporation, the S&P 500 Index,  
and the S&P Aerospace & Defense Index



- (1) Assumes \$100 invested at the close of business on December 31, 2006, in Northrop Grumman Corporation common stock, Standard & Poor's (S&P) 500 Index, and the S&P Aerospace & Defense Index.
- (2) The cumulative total return assumes reinvestment of dividends. In March 2011, we completed the HII spin-off. Our shareholders received one share of HII common stock for every six shares of our common stock held on the record date. The effect of the spin-off is reflected in the cumulative total return as a reinvested dividend.
- (3) The S&P Aerospace & Defense Index is comprised of The Boeing Company, General Dynamics Corporation, Goodrich Corporation, Honeywell International Inc., L-3 Communications, Lockheed Martin Corporation, Northrop Grumman Corporation, Precision Castparts Corporation, Raytheon Company, Rockwell Collins, Inc., Textron, Inc., and United Technologies Corporation.
- (4) The total return is weighted according to market capitalization of each company at the beginning of each year.

**NORTHROP GRUMMAN CORPORATION**

(e) *Purchases of Equity Securities by the Issuer and Affiliated Purchasers.*

The table below summarizes our repurchases of common stock during the three months ended December 31, 2011:

<b>Period</b>	Total Number of Shares Purchased <sup>(1)</sup>	Average Price Paid per Share <sup>(2)</sup>	Total Numbers of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (\$ in millions)
October 1 through October 31, 2011	6,461,209	\$ 54.04	6,461,209	\$ 2,003
November 1 through November 30, 2011	2,329,649	56.39	2,329,649	1,871
December 1 through December 31, 2011	2,978,115	56.65	2,978,115	1,703
<b>Ending balance</b>	<b>11,768,973</b>	<b>\$ 55.17</b>	<b>11,768,973</b>	<b>\$ 1,703<sup>(1)</sup></b>

(1) On June 16, 2010, the company's board of directors authorized a share repurchase program of up to \$2 billion of the company's common stock. On April 25, 2011, after the company had repurchased shares totaling \$245 million, the company's board of directors authorized an increase to the remaining share repurchase authorization to \$4.0 billion. As of December 31, 2011, the company had \$1.7 billion remaining for share repurchases under this authorization.

(2) Includes commissions paid and calculated as the average price paid per share under the respective repurchase programs.

Share repurchases take place at management's discretion or under pre-established, non-discretionary programs, depending on market conditions, in the open market, and in privately negotiated transactions. We retire our common stock upon repurchase and have not made any purchases of common stock other than in connection with publicly announced repurchase program authorizations. In connection with the spin-off of the Shipbuilding business, we obtained a Private Letter Ruling ("PLR") from the Internal Revenue Service that limits our share repurchases to approximately 88 million shares within two years of the spin-off (a maximum of 30 percent of outstanding shares at the time of the separation). Due to share repurchases subsequent to the spin-off, the remaining number of shares that we can repurchase under this share repurchase limitation as of December 31, 2011, is approximately 48 million shares. Cash available from unusual transactions, such as the disposition of significant assets, should they arise, can be used to repurchase additional shares.

(f) *Securities Authorized for Issuance Under Equity Compensation Plans .*

For a description of securities authorized under our equity compensation plans, see Note 17 to the consolidated financial statements in Part II, Item 8.

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**NORTHROP GRUMMAN CORPORATION**

**Item 6. Selected Financial Data**

The data presented in the following table is derived from the audited consolidated financial statements and other information adjusted to reflect the effects of discontinued operations. See also Business Dispositions in Part II, Item 7.

**Selected Financial Data**

<i>\$ in millions, except per share amounts</i>	Year Ended December 31				
	2011	2010	2009	2008	2007
<b>Sales and Service Revenues</b>					
U.S. Government	\$23,905	\$25,507	\$24,955	\$23,274	\$21,687
Other customers	2,507	2,636	2,695	2,977	2,957
Total revenues	\$26,412	\$28,143	\$27,650	\$26,251	\$24,644
Operating income	\$3,276	\$2,827	\$2,274	\$2,076	\$2,464
Earnings from continuing operations	2,086	1,904	1,434	1,018	1,448
Basic earnings per share, from continuing operations	\$7.54	\$6.41	\$4.49	\$3.04	\$4.24
Diluted earnings per share, from continuing operations	7.41	6.32	4.44	2.98	4.09
Cash dividends declared per common share	1.97	1.84	1.69	1.57	1.48
<b>Year-End Financial Position</b>					
Total assets <sup>(1)</sup>	\$25,411	\$31,410	\$30,297	\$30,077	\$33,252
Notes payable to banks and long-term debt	3,948	4,724	4,011	3,661	3,772
Total long-term obligations and preferred stock <sup>(2)</sup>	8,940	7,947	8,959	8,926	7,278
<b>Financial Metrics</b>					
Cash provided by continuing operations	\$2,347	\$2,056	\$1,995	\$2,705	\$2,050
Free cash flow from continuing operations <sup>(3)</sup>	1,855	1,471	1,454	2,132	1,478
<b>Other Information</b>					
Company-sponsored research and development expenses	\$543	\$580	\$588	\$543	\$502
Maintenance and repairs	364	369	371	314	216
Payroll and employee benefits	10,275	10,861	11,119	10,127	9,616
Number of employees at year-end	72,500	79,600	81,800	81,418	79,818

- (1) Total assets as of December 31, 2007 – 2010 have been reduced by \$121 million as a result of the correction of deferred tax assets described in Note 10 in Part II, Item 8.
- (2) In 2008, all of the outstanding shares of preferred stock were converted or redeemed. Total long-term obligations includes the long-term portions of debt, pension and post-retirement plan liabilities, environmental liabilities, deferred compensation and other long-term obligations.
- (3) Free cash flow from continuing operations is a non-GAAP financial measure and is calculated as cash provided by continuing operations less capital expenditures and outsourcing contract and related software costs. Outsourcing contract and related software costs are similar to capital expenditures in that the contract costs represent incremental external costs or certain specific internal costs that are directly related to the contract acquisition and transition/set-up. These outsourcing contract and related software costs are deferred and expensed over the contract's period of performance. See Liquidity and Capital Resources – Free Cash Flow from Continuing Operations in Part II, Item 7 for more information on this measure.

**NORTHROP GRUMMAN CORPORATION**

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

**OVERVIEW**

**Notable Events**

Certain notable events or activities affecting our 2011 consolidated financial results included the following:

*Significant financial events for the year ended December 31, 2011:*

- We completed the spin-off of our Shipbuilding business (Huntington Ingalls Industries or HII), which is now reported within discontinued operations.
- In connection with the spin-off of HII, we received cash of \$1.4 billion.
- We reduced our participation in the National Security Technologies (NSTec) joint venture, which resulted in a \$1.7 billion reduction in contract backlog and a \$579 million reduction in 2011 revenues.
- We repaid notes with a face value of \$768 million.
- We made voluntary pension funding contributions totaling \$1.0 billion.
- We repurchased 40.2 million shares of common stock for a total of \$2.3 billion.
- In the second quarter of 2011, we increased the quarterly stock dividend from \$0.47 per share to \$0.50 per share.
- We paid \$543 million in cash dividends.

*Other notable events for the year ended December 31, 2011:*

- We relocated our corporate offices in Los Angeles, California and in Rosslyn, Virginia to our new corporate office in Falls Church, Virginia.
- We increased the authorization for share repurchases by approximately \$2.2 billion.

**Political and Economic Environment**

The U.S. and global economies have experienced a period of substantial economic uncertainty and turmoil, with high levels of national debt, and the related financial markets have been characterized by significant volatility.

Current levels of deficit spending in the U.S. could prove to be unsustainable over the long term. Although defense spending is expected to remain a national priority within future federal budgets, the passage of the Budget Control Act of 2011 (the Budget Control Act) in August 2011 marked a growing political acceptance of cutting planned defense spending as part of a deficit reduction solution. Some allied government defense spending has also come under increasing pressure as governments search for ways to reduce their deficits and national debts.

The Administration and Congress will likely continue to debate the size of the new defense budget plan for the next decade, but spending over the next several years is expected to drop measurably from previously planned levels, absent a significant national security event. Future defense plans and changes in defense spending levels could adversely affect the individual programs and delay purchasing by our customers, which could have a material adverse effect on the company's consolidated financial position, results of operations, and/or cash flows. While these significant budgetary considerations put downward pressure on growth in our industry, we believe that our business is well positioned in areas that the DoD has indicated are areas of focus for future defense spending to help the DoD meet its critical future capability requirements for protecting U.S. security and the security of our allies in the years to come.

The Budget Control Act raised the statutory limit on the amount of permissible federal debt and committed the U.S. Government to reduce significantly the federal deficit in the coming decade. The Budget Control Act consists of two parts, both of which could impact future defense spending levels. The first part mandates a total reduction of \$940 billion to the fiscal year 2012 Presidential Budget submission as part of established caps on discretionary spending through 2021. Of this total reduction, approximately \$490 billion is expected to come from defense spending. The Budget Control Act also set up a Joint Committee of Congress (the Joint Committee) that

## **NORTHROP GRUMMAN CORPORATION**

was responsible for identifying an additional \$1.2 to \$1.5 trillion in deficit reductions by November 23, 2011. The Joint Committee was unable to identify the additional deficit reductions by this deadline thereby triggering a second provision of the Budget Control Act called "sequestration," which calls for very substantial automatic spending cuts split between defense and non-defense programs that will start in 2013 and continue over a nine-year period. Both the Administration and many members of Congress have indicated that sequestration is not the preferred path to deficit reduction and that alternative steps should be pursued. While we believe efforts may be underway to prevent the automatic spending cuts scheduled to begin in 2013, the outcome of these efforts is uncertain.

The fiscal year 2012 defense budget provides a nominal increase in base funding over fiscal year 2011 levels. We anticipate continued debate over defense spending with the President's Budget request for fiscal year 2013 and the subsequent Congressional budget process. The forthcoming general election in November is expected to generate significant additional political dialogue centered around the federal deficit and potential cuts in government spending. Budget decisions made in this environment could have long-term consequences for our company and the entire defense industry.

We expect U.S. force levels and budget resources tied to current hostilities to continue to draw down. As overall defense spending is reduced, the DoD is re-evaluating the role and structure of the military. The DoD recently released a new defense strategy that resulted from a comprehensive review intended to guide its priorities and budgeting decisions. The new guidance indicates the U.S. military needs to project power globally and operate effectively in all domains, including cybersecurity, and it places particular emphasis on the Asia Pacific region as an area of strategic focus.

In January 2012, the Secretary of Defense announced a number of program changes and cancellations that are scheduled to take place over the next several years in part to comply with certain provisions of the Budget Control Act. Certain of these program changes and cancellations will have an impact on programs in which we participate.

The U.S. is expected to continue to maintain a range of powerful military capabilities to support U.S. national security interests, even amidst economic difficulties and reductions in defense spending levels, and consequently we expect the U.S. will continue to need many of the sophisticated capabilities that we provide. We believe our portfolio aligns well with the DoD's indicated requirements, and, as a result, we believe we are well positioned to help the DoD meet its critical future capability requirements for protecting U.S. security in the years ahead.

Although reductions to individual programs in which we participate or for which we expect to compete are always possible (such as the recent announcements regarding the Block 30 Global Hawk and F-35 programs), we believe that spending on recapitalization, modernization and maintenance of defense, intelligence, and homeland security assets will continue to be a national priority. Future defense spending is expected to include the development and procurement of new manned and unmanned military platforms and systems along with advanced electronics and software to enhance the capabilities of individual systems and provide real-time integration of individual surveillance, information management, strike, and battle management platforms. Given the current era of irregular warfare, we expect increased investment in persistent awareness with intelligence, surveillance and reconnaissance (ISR) systems, cyber warfare, and an expansion of information available for the warfighter to make timely decisions. We expect other significant new competitive opportunities to include long range strike, directed energy applications, missile defense, satellite communications systems, restricted programs, cybersecurity, technical services and information technology contracts, and numerous international and homeland security programs.

We believe that the U.S. Government will continue to place a high priority on defense spending and national security, as well as economic challenges, and will continue to invest in sophisticated systems providing long-range surveillance and intelligence, battle management, precision strike, and strategic agility. In addition, the U.S. Government continues to face challenges with recapitalizing equipment and rebuilding readiness while also pursuing modernization and reducing overhead and inefficiency.

See Risk Factors located in Part I, Item 1A for a more complete description of risks we face.



## **NORTHROP GRUMMAN CORPORATION**

### **Cybersecurity**

Our industry and the broader national security community are subject to various cybersecurity threats including, but not limited to, attempts to gain unauthorized access to sensitive information. We proactively work to assess and mitigate the evolving risks. In addition, we have partnered with various industry and government participants, including the DoD, to collaborate around increased awareness and enhanced protections against cybersecurity threats. See Risk Factors located in Part I, Item 1A for a more complete description of the risks that we face due to security threats, including cybersecurity threats.

### **Green Initiatives**

We could be affected by future laws or regulations, including but not limited to, those enacted in response to climate change concerns and other actions known as “green initiatives.” In 2009, we established a goal of reducing our greenhouse gas emissions over a five-year period through December 31, 2014. In 2010, we established goals for water usage and solid waste generation. To comply with laws, regulations, and green initiatives, including our goals, we have incurred and expect to incur capital and operating costs, but at this time, such costs have not had, and we do not expect that such costs will have, a material adverse effect on the company’s consolidated financial position, results of operations or cash flows.

### **BUSINESS DISPOSITIONS**

*2011* – We completed the spin-off to our shareholders of HII effective March 31, 2011. HII operates the business that was previously the Shipbuilding segment (Shipbuilding) of the company prior to the spin-off. The spin-off was the culmination of the company’s decision to explore strategic alternatives for Shipbuilding as it was determined to be in the best interests of shareholders, customers, and employees to allow both the company and Shipbuilding to pursue more effectively their respective opportunities to maximize value. We made a pro rata distribution to our shareholders of one share of HII common stock for every six shares of our common stock held on the record date of March 30, 2011, or 48.8 million shares of HII common stock. There was no gain or loss recognized by the company as a result of the spin-off transaction. In connection with the spin-off, HII issued senior notes and entered into a credit facility with third-party lenders, and HII used a portion of the proceeds of the notes and credit facility to fund a \$1.4 billion cash contribution to us. Sales for Shipbuilding for the three months ended March 31, 2011, were \$1.6 billion and sales for the years ended December 31, 2010 and 2009, were \$6.7 billion and \$6.2 billion, respectively. The assets, liabilities and operating results of this business unit are reported as discontinued operations in the consolidated financial statements for all periods presented.

*2009* – We sold our Advisory Services Division (ASD) in December 2009, for \$1.65 billion in cash to an investor group led by General Atlantic, LLC and affiliates of Kohlberg Kravis Roberts & Co. L.P., and recognized a gain of \$15 million, net of taxes. ASD was a business unit comprised of the assets and liabilities of TASC, Inc., its wholly owned subsidiary TASC Services Corporation, and certain contracts carved out from other businesses also in Information Systems that provide systems engineering technical assistance (SETA) and other analysis and advisory services. Sales for ASD in the year ended December 31, 2009 was approximately \$1.5 billion.

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*Discontinued Operations* – Earnings for the businesses classified within discontinued operations for the dispositions discussed above were as follows:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	\$1,646	\$6,711	\$7,740
Earnings from discontinued operations	59	229	345
Income tax expense	(28)	(95)	(111)
Earnings, net of tax	31	134	234
Gain on divestitures	2	10	446
Income tax (expense) benefit	(1)	5	(428)
Gain on divestitures, net of tax	1	15	18
Earnings from discontinued operations, net of tax	\$ 32	\$ 149	\$ 252

**CONTRACTS**

We generate the majority of our business from long-term government contracts for development, production, and support activities. Government contracts typically include the following major cost elements: material, labor, overhead, subcontract costs, and general and administrative costs. Unless otherwise specified in a contract, costs billed to contracts with the U.S. Government are determined under the requirements of the Federal Acquisition Regulation (FAR) and CAS regulations as allowable and allocable costs. Examples of costs incurred by us and not billed to the U.S. Government in accordance with the requirements of the FAR and CAS regulations include, but are not limited to, certain legal costs, lobbying costs, charitable donations, interest expense and advertising costs.

Our long-term contracts typically fall into one of two broad categories:

*Flexibly Priced Contracts* – Flexibly priced contracts include both cost-type and fixed-price incentive contracts. Cost-type contracts provide for reimbursement of the contractor's allowable costs incurred plus a fee that represents profit. Cost-type contracts generally require that the contractor use its best efforts to accomplish the scope of the work within some specified time and some stated dollar limitation. Fixed-price incentive contracts also provide for reimbursement of the contractor's allowable costs up to a ceiling amount, but are subject to a cost-share limit that affects profitability. Fixed-price incentive contracts effectively become firm fixed-price contracts once the cost-share limit is reached.

*Firm Fixed-Price Contracts* – A firm fixed-price contract is a contract in which the specified scope of work is agreed to for a price that is a pre-determined, negotiated amount and not generally subject to adjustment regardless of costs incurred by the contractor. Time-and-materials contracts are considered firm fixed-price contracts as they specify a fixed hourly rate for each labor hour charged.

The following table summarizes 2011 revenue recognized by contract type and customer:

<i>(\$ in millions)</i>	U.S. Government	Other Customers	Total	Percent of Total
Flexibly priced contracts	\$ 15,413	\$ 237	\$ 15,650	59%
Firm fixed-price contracts	8,492	2,270	10,762	41%
Total sales and service revenues	\$23,905	\$2,507	\$ 26,412	100%

## **NORTHROP GRUMMAN CORPORATION**

*Contract Fees* – Negotiated contract fee structures, for both flexibly priced and fixed-price contracts include, but are not limited to: fixed-fee amounts, cost sharing arrangements to reward or penalize for either under or over cost target performance, positive award fees, and negative penalty arrangements. Profit margins may vary materially depending on the negotiated contract fee arrangements, the achievement of performance objectives, and the stage of performance at which the right to receive fees, particularly under incentive and award fee contracts, is finally determined.

*Award Fees* – Certain contracts contain provisions consisting of award fees based on performance criteria such as cost, schedule, quality, and technical performance. Award fees are determined and earned based on an evaluation by the customer of the company's performance against negotiated criteria. Award fees that can reasonably be estimated and are deemed reasonably assured, are recorded over the performance period of the contract. Award fee contracts are used in certain of our operating segments.

*Compliance and Monitoring* – We monitor our policies and procedures with respect to our contracts on a regular basis to enhance consistent application under similar terms and conditions, as well as compliance with all applicable government regulations and laws. In addition, costs incurred and allocated to contracts with the U.S. Government are routinely audited by the Defense Contract Audit Agency.

## **CRITICAL ACCOUNTING POLICIES, ESTIMATES, AND JUDGMENTS**

### **Revenue Recognition**

*Overview* – We derive the majority of our business from long-term contracts for the production of goods and services provided to the federal government, which are accounted for in conformity with accounting principles generally accepted in the United States of America (GAAP) for construction-type and production-type contracts and federal government contractors. We classify contract revenues as product sales or service revenues depending on the predominant attributes of the relevant underlying contract. We also enter into contracts that are not associated with the federal government, such as contracts to provide certain services to non-federal government customers. We account for those contracts in accordance with the relevant GAAP revenue recognition principles.

We consider the nature of these contracts and the types of products and services provided when determining the proper accounting method for a particular contract.

*Percentage-of-Completion Accounting* – We generally recognize revenues from our long-term contracts under the cost-to-cost or the units-of-delivery measures of the percentage-of-completion method of accounting. The percentage-of-completion method recognizes income as work on a contract progresses. For most contracts, sales are calculated based on the percentage of total costs incurred in relation to total estimated costs at completion of the contract. The units-of-delivery measure is a modification of the percentage-of-completion method, which recognizes revenues as deliveries are made to the customer generally using unit sales values in accordance with the contract terms. Under percentage-of-completion accounting, we estimate profit as the difference between total estimated revenue and total estimated cost of a contract and recognize that profit over the life of the contract based on each contract's percentage-of-completion.

The use of the percentage-of-completion method requires us to make reasonably dependable cost estimates for the design, manufacture, and delivery of our products and services. The cost estimation process is based upon the professional knowledge of our engineers, program managers and financial professionals, and draws on their significant experience and judgment. Such costs are typically incurred over a period of several years, and estimation of these costs requires the use of judgment.

Many contracts contain positive and negative profit incentives based upon performance relative to predetermined targets that may occur during or subsequent to delivery of the product. These incentives take the form of potential additional fees to be earned or penalties to be incurred. Incentives and award fees that can be reasonably assured and reasonably estimated are recorded over the performance period of the contract. Incentives and award fees that are not reasonably assured or cannot be reasonably estimated are recorded when awarded or at such time as we believe a reasonable estimate can be made.

## **NORTHROP GRUMMAN CORPORATION**

Changes in estimates of contract sales, costs, and profits are recognized using the cumulative catch-up method of accounting. This method recognizes in the current period the cumulative effect of the changes on current and prior periods. Hence, the effect of the changes on future periods of contract performance is recognized as if the revised estimate had been the original estimate. A significant change in an estimate on one or more contracts could have a material effect on our consolidated financial position, results of operations and/or cash flows.

*Certain Service Contracts* – We generally recognize revenue under contracts to provide services to non-federal government customers when services are performed. Service contracts include operations and maintenance contracts, and outsourcing-type arrangements, primarily in Technical Services and Information Systems. We generally recognize revenue under such contracts on a straight-line basis over the period of contract performance, unless evidence suggests that the revenue is earned or the obligations are fulfilled in a different pattern. Costs incurred under these service contracts are expensed as incurred, except that direct and incremental set-up costs are capitalized and amortized over the life of the agreement. Operating profit related to such service contracts may fluctuate from period to period, particularly in the earlier phases of the contract.

Contracts that include more than one type of product or service are accounted for under the relevant GAAP guidance for revenue arrangements with multiple elements. Accordingly, for applicable arrangements, revenue recognition includes the proper identification of separate units of accounting and the allocation of revenue across all elements based on relative fair values.

*Cost Estimation* – The cost estimation process is based upon the professional knowledge of our engineers, program managers and financial professionals, and draws on their significant experience and judgment. Factors that are considered in estimating the work to be completed and ultimate contract recovery include the availability, productivity and cost of labor, the nature and complexity of the work to be performed, the effect of change orders, the availability of materials, the effect of any delays in performance, the availability and timing of funding from the customer, and the recoverability of any claims included in the estimates to complete. A significant change in an estimate on one or more contracts could have a material effect on our consolidated financial position, results of operations and/or cash flows. We update our contract cost estimates at least annually and more frequently as determined by events or circumstances. We generally review and reassess our cost and revenue estimates for each significant contract on a quarterly basis.

We record a provision for the entire loss on the contract in the period the loss is determined when estimates of total costs to be incurred on a contract exceed estimates of total revenue to be earned. We offset loss provisions first against costs that are included in unbilled accounts receivable or inventoried assets, with any remaining amount reflected in liabilities.

### **Purchase Accounting**

*Overview* – We allocate the purchase price of an acquired business to the underlying tangible and intangible assets acquired and liabilities assumed based upon their respective fair market values, with the excess recorded as goodwill. Such fair market value assessments require judgments and estimates that can be affected by contract performance and other factors over time, which may cause final amounts to differ materially from original estimates. Adjustments to the fair value of purchased assets and liabilities after the initial measurement period are recognized in net earnings.

*Acquisition Accruals* – We establish certain accruals in connection with indemnities and other contingencies from our acquisitions and divestitures. We have recorded these accruals and subsequent adjustments during the purchase price allocation period for acquisitions and as events occur for divestitures. The accruals are determined based upon the terms of the purchase or sales agreements and, in most cases, involve a significant degree of judgment. We record these accruals based on our interpretation of the terms of the purchase or sale agreements, known facts, and an estimation of probable future events based on our experience, which may cause final amounts to differ materially from original estimates.

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### **Goodwill and Other Intangible Assets**

We perform an annual impairment test of our goodwill and intangible assets with indefinite lives as of November 30th, or between annual tests if events occur or circumstances change which suggest that the goodwill or indefinite-lived intangible assets should be evaluated. Intangible assets with finite lives are tested for impairment, whenever events or circumstances indicate that the carrying value may not be recoverable. When testing goodwill, we compare the fair value of the reporting unit to its carrying value.

To determine the fair value of our reporting units, we primarily use the income approach based on the cash flows that the reporting unit expects to generate in the future. This income valuation method requires management to project revenues, operating expenses, working capital investment, capital spending and cash flows for the reporting units over a multi-year period, as well as determine the weighted-average cost of capital (WACC) used as a discount rate and the terminal value assumptions. The WACC takes into account the relative weights of each component of our consolidated capital structure (equity and debt) and represents the expected cost of new capital adjusted as appropriate to consider lower risk profiles associated with longer-term contracts and barriers to market entry. The terminal value assumptions are applied to the final year of the discounted cash flow model. Impairment assessment inherently involves management judgments as to assumptions about expected future cash flows and the impact of market conditions on those assumptions. Due to the many variables inherent in the estimation of a business's fair value and the relative size of our recorded goodwill, differences in assumptions may have a material effect on the results of our impairment analysis. We also corroborate the fair values determined under the income approach using the market valuation method to estimate the fair value of our reporting units by utilizing industry multiples (including relevant control premiums) of operating earnings. When calculating impairment for intangible assets with indefinite lives, we compare the fair value of these assets, as determined based on the income and market valuation methods, to the carrying value. If the carrying value exceeds the fair value, we determine the fair value of the reporting unit's individual assets and liabilities and calculate the implied fair value of goodwill.

In the fourth quarter of 2011, we performed our annual goodwill impairment evaluation. The results of our annual goodwill impairment test as of November 30, 2011, indicated that the estimated fair value of each reporting unit exceeds its carrying value. There were no impairment charges recorded in the years ended December 31, 2011, 2010 and 2009.

### **Litigation, Commitments, and Contingencies**

We are subject to a range of claims, investigations, lawsuits, environmental matters, income tax matters, and administrative proceedings that arise in the ordinary course of business. Estimating liabilities and costs associated with these matters requires judgment based upon professional knowledge and experience of management and our internal and external legal counsel. In accordance with our practices relating to accounting for contingencies, we determine whether to record a charge to earnings and, if so, what amount based on consideration of the facts and circumstances of each matter as then known to us, including any settlement offers, and our assessment of the probability of the liabilities and whether the amount of the loss can be reasonably estimated. The ultimate resolution of any such exposure to us may vary materially from earlier estimates as further facts and circumstances develop or become known to us. When we believe, based on the facts available to us, that a liability is probable and the loss is reasonably estimable, we record our best estimate of the amount of the ultimate loss. When a range of costs is reasonably estimable, but no amount within that range is a better estimate than another, we record what we estimate as the lower end of the range. For further information on the treatment of these contingencies, see Note 1, Note 14 and Note 15 to the consolidated financial statements in Part II, Item 8.

### **U.S. Government Cost Claims**

From time to time, our customers advise us of ordinary course claims and penalties concerning certain potential disallowed costs. When such findings are presented, we engage U.S. Government representatives in discussions to enable us to evaluate the merits of these claims, as well as to assess the amounts being claimed. Where appropriate, provisions are made to reflect our expected exposure to matters raised by the U.S. Government representatives.

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### Income Taxes

Provisions for federal, foreign, state, and local income taxes are calculated on reported financial statement pre-tax income based on current tax law and include the cumulative effect of any changes in tax rates from those used previously in determining deferred tax assets and liabilities. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different time periods for financial reporting purposes than for income tax purposes. State and local income and franchise tax provisions are allocable to contracts in process and, accordingly, are included in operating income.

*Uncertain Tax Positions* – Tax positions that meet the more-likely-than-not recognition threshold may be recognized or continue to be recognized in the financial statements. If a tax position does not meet the minimum statutory threshold to avoid payment of penalties, the company recognizes an expense for the amount of the penalty in the period it is determined. The company recognizes federal interest accrued related to unrecognized tax benefits within income tax expense. Federal penalties are recognized as a component of income tax expense. See Note 10 to the consolidated financial statements in Part II, Item 8.

### Retirement Benefits

*Overview* – We record our employee pension and other post-retirement plans in accordance with US GAAP under Financial Accounting Standards (FAS) and charge the costs of these plans to our contracts with customers in accordance with the FAR and the related Cost Accounting Standards (CAS) that govern such plans. In measuring periodic pension cost, both FAS and CAS recognize a normal services cost component, but there are differences in the way the remaining components of annual pension costs are calculated under each method, including the assumptions and methods used for measuring the plan obligations. As a result, retiree benefit plan expense amounts for FAS purposes are different from the amounts for CAS purposes. Further, differences result from different methodologies in how estimated earnings on pension assets and interest expense on the pension obligations are measured, and the measurement and allocation periods over which gains/losses related to pension assets and actuarial changes are determined. CAS pension expense is allocated to our segments and is included in their measurement of segment operating income, and the difference between the CAS and FAS pension expense is recorded in operating income at the consolidated company level.

*Recent Developments in U.S. Government Cost Accounting Standards Pension Recovery Rules* – On December 27, 2011 the CAS Board published a final rule revising CAS 412, “Composition and Measurement of Pension Cost,” and CAS 413, “Adjustment and Allocation of Pension Cost.” These revisions are intended to partially harmonize the measurement and period of assignment of defined benefit pension plan costs allocable to U.S. Government contracts, and the minimum required contribution under the Employee Retirement Income Security Act of 1974 (ERISA), as amended by the Pension Protection Act (PPA) of 2006. We anticipate that the rule will better align, but not eliminate, mismatches between ERISA funding requirements and CAS pension costs for U.S. Government CAS covered contracts. Under the final rule, there is a five-year transition period, during which an increasing percentage of the harmonization effect is to be recognized, starting from 0% in the first year to 100% in the fifth year and thereafter. The rule becomes effective February 27, 2012, with 2013 being the first year of applicability for the revised accounting practices required by the rule. Price proposals for CAS covered contracts awarded on or after the effective date of February 27, 2012, will reflect the effects of the rule. We believe for CAS covered contracts awarded prior to the effective date, contractors will be entitled to an equitable adjustment for any additional CAS basis contract costs resulting from implementation of the final rule.

*FAS Benefit Plan Assumptions* – We perform an annual evaluation of the assumptions used in determining projected benefit obligations and the fair values of plan assets for our pension plans and other post-retirement benefit plans in consultation with our outside actuaries. In the event that we determine that plan amendments or changes in the assumptions are warranted, future pension and post-retirement benefit expenses could increase or decrease. The principal assumptions that have a significant effect on our consolidated financial position and results of operations are the discount rate, the expected long-term rate of return on plan assets, the health care cost trend rate and the estimated fair market value of plan assets. For certain plan assets where the fair market value is not readily determinable, such as real estate, private equity, and hedge funds, estimates of fair value are determined using the best information available.

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*Discount Rate* – The discount rate represents the interest rate that is used to determine the present value of future cash flows currently expected to be required to settle the pension and post-retirement benefit obligations. The discount rate is generally based on the yield of high-quality corporate fixed-income investments. At the end of each year, the discount rate is primarily determined using a portfolio of high quality bonds matching the notional cash inflows with the expected benefit payments for each significant benefit plan. Taking into consideration the factors noted above, our weighted-average pension composite discount rate was 5.03 percent at December 31, 2011, and 5.75 percent at December 31, 2010. Holding all other assumptions constant, and since net actuarial gains and losses were in excess of the 10 percent accounting corridor in 2011, an increase or decrease of 25 basis points in the discount rate assumption for 2011 would have decreased or increased pension and post-retirement benefit expense for 2011 by approximately \$77 million, of which \$2 million relates to post-retirement benefits, and decreased or increased the amount of the benefit obligation recorded at December 31, 2011, by approximately \$800 million, of which \$55 million relates to post-retirement benefits. The effects of hypothetical changes in the discount rate for a single year may not be representative and may be asymmetrical or nonlinear for future years because of the application of the accounting corridor. The accounting corridor is a defined range within which amortization of net gains and losses is not required.

*Expected Long-Term Rate of Return* – The expected long-term rate of return on plan assets represents the average rate of earnings expected on the funds invested in a specified target asset allocation to provide for anticipated future benefit payment obligations. For 2011 and 2010, we assumed an expected long-term rate of return on plan assets of 8.5 percent. An increase or decrease of 25 basis points in the expected long-term rate of return assumption for 2011, holding all other assumptions constant, would increase or decrease our pension and post-retirement benefit expense for 2011 by approximately \$52 million, of which \$2 million relates to post-retirement benefits. For 2012 pension and post-retirement benefit plan purposes, we have assumed an expected long-term rate of return on plan assets of 8.25 percent.

*Health Care Cost Trend Rates* – The health care cost trend rates represent the annual rates of change in the cost of health care benefits based on external estimates of health care inflation, changes in health care utilization or delivery patterns, technological advances, and changes in the health status of the plan participants. Using a combination of market expectations and economic projections including the effect of health care reform, we selected an expected initial health care cost trend rate of 7.5 percent for 2012 and an ultimate health care cost trend rate of 5 percent reached in 2017. In 2010, we assumed an expected initial health care cost trend rate of 8 percent for 2011 and an ultimate health care cost trend rate of 5 percent reached in 2017. Although our actual cost experience is much lower at this time, market conditions and the potential effects of health care reform are expected to increase medical cost trends in the next one to three years thus our past experience may not reflect future conditions.

Differences in the initial through the ultimate health care cost trend rates within the range indicated below would have had the following impact on 2011 post-retirement benefit results:

<i>\$ in millions</i>	1-Percentage- Point Increase	1-Percentage- Point Decrease
<b>Increase (Decrease) From Change In Health Care Cost Trend Rates To</b>		
Post-retirement benefit expense	\$ 5	\$ (6)
Post-retirement benefit liability	64	(75)

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Selected financial highlights are presented in the table below:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	\$ 26,412	\$ 28,143	\$ 27,650
Cost of sales and service revenues	(20,786)	(22,849)	(22,805)
General and administrative expenses	(2,350)	(2,467)	(2,571)
Operating income	3,276	2,827	2,274
Interest expense	(221)	(269)	(269)
Charge on debt redemption		(229)	
Federal and foreign income tax expense	(997)	(462)	(636)
Cash provided by continuing operations	2,347	2,056	1,995

**Operating Performance Assessment and Reporting**

We manage and assess the performance of our businesses based on our performance on individual contracts and programs (two or more closely-related contracts) generally obtained from government organizations using the financial measures referred to below, with consideration given to the Critical Accounting Policies, Estimates and Judgments described above in Part II, Item 7. As indicated in our discussion on “Contracts” above in Part II, Item 7, our portfolio of long-term contracts is largely flexibly-priced, which means that sales tend to fluctuate in concert with costs across our large portfolio of active contracts, with operating income being a critical measure of operational performance. Due to FAR rules that govern our business, most types of costs are allowable, and we do not focus on individual cost groupings (such as manufacturing, engineering, and design labor costs, subcontractor costs, material costs, overhead costs, and general and administrative costs), as much as we do on total contract costs, which is the key driver of both revenue and operating income.

In any given reporting period, each of our segments manages numerous contracts that provide for the delivery of products or services to our customers. Our contract management process involves the use of contract estimates-at-completion (EACs) that are generally prepared and evaluated on a bottoms-up basis at least annually and reviewed on a quarterly basis over the performance period of the contract. These EACs include an estimated contract operating income margin rate based initially on the contract award amount, adjusted to reflect estimated risks related to contract performance. These risks typically include technical risk, schedule risk and performance risk based upon our evaluation of the contract effort. Similarly, the EACs include identified opportunities for operating income margin rate improvement. Over the performance period of the contract, our program management organizations perform recurring evaluations of contract performance and adjust the contract revenue and cost estimates over the life of the contract to reflect the latest reliable information available. Our business and program management organizations are comprised of a large cadre of skilled professional managers who utilize our contract administration and management control systems with the objective of successfully overseeing our contract performance to satisfy the customer’s expectations, deliver high quality products and services, and manage contract risks and opportunities to achieve an appropriate operating income margin rate on the contract. Our comprehensive business and contract management process involves personnel from the planning, production control, contracts, cost management, supply chain and program and business management functions. As part of this overall contract management function, these personnel monitor compliance with our critical accounting policies related to contract accounting and compliance with U. S. Government regulations. As a result, contract operating income and period-to-period contract operating income margin rates are adjusted over the contract performance period to reflect changes in the risks and opportunities affecting the contract, and adjustments may have a favorable or unfavorable effect on operating income margin depending upon the specific conditions affecting each contract.



## NORTHROP GRUMMAN CORPORATION

In evaluating our operating performance, we look primarily at changes in sales and service revenues, and operating income, including the effects of meaningful changes in operating income as a result of changes in contract estimates and the use of the cumulative catch-up method of accounting in accordance with GAAP. Where applicable, unusual fluctuations in operating performance attributable to changes in a specific cost element across multiple contracts are described in our analysis. Based on this approach and the nature of our operations, the discussion of results of operations generally focuses around our four segments versus distinguishing between products and services.

### Sales and Service Revenues

Sales and service revenues consist of the following:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Product sales	<b>\$15,073</b>	\$ 16,091	\$ 16,004
Service revenues	<b>11,339</b>	12,052	11,646
Sales and service revenues	<b>\$26,412</b>	\$ 28,143	\$27,650

2011 – Sales and service revenues for 2011 decreased \$1,731 million, or 6 percent, as compared to 2010, reflecting lower sales at all four operating segments.

Product sales for 2011 decreased \$1,018 million, or 6 percent, as compared to 2010, primarily due to lower sales volume on space and manned aircraft programs at Aerospace Systems and lower sales volume in Land and Self Protection Systems at our Electronic Systems segment. Service revenues for 2011 decreased \$713 million, or 6 percent, as compared to 2010, primarily due to the reduced participation by the Technical Services segment in the NSTec joint venture effective January 1, 2011, resulting in no sales recorded for the joint venture in 2011, compared to \$579 million in 2010, and lower sales volume on defense and civil systems at the Information Systems segment.

2010 – Sales and service revenues for the year ended December 31, 2010, increased \$493 million, or 2 percent, as compared to 2009, reflecting higher sales at Aerospace Systems and Technical Services, partially offset by lower sales at Information Systems and Electronic Systems.

Product sales for the year ended December 31, 2010, increased \$87 million, or 1 percent, as compared to 2009, primarily due to sales growth in Aerospace Systems partially offset by lower product sales in Electronic Systems and Information Systems. Service revenues for the year ended December 31, 2010, increased \$406 million, or 3 percent, as compared to 2009, primarily due to sales growth in Technical Services largely related to the KC-10 Contractor Logistics Support (KC-10) program.

See the Segment Operating Results section below for further information.

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The first table below presents cost of sales and service revenues and general and administrative expenses on a consolidated basis while the second table presents our cost of sales and service revenues on a segment-by-segment basis, and with the impact of non-segment factors:

*Cost of Sales and Service Revenues and General Administrative Expenses <sup>(1)</sup>*

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Cost of sales and service revenues			
Cost of product sales	\$ 11,491	\$ 12,558	\$ 12,648
<i>% of product sales</i>	<i>76.2%</i>	<i>78.0%</i>	<i>79.0%</i>
Cost of service revenues	9,295	10,291	10,157
<i>% of service revenues</i>	<i>82.0%</i>	<i>85.4%</i>	<i>87.2%</i>
General and administrative expenses	2,350	2,467	2,571
<i>% of total sales and service revenues</i>	<i>8.9%</i>	<i>8.8%</i>	<i>9.3%</i>
Cost of sales and service revenues and general and administrative expenses	\$ 23,136	\$ 25,316	\$ 25,376

(1) As of December 31, 2011, the company revised its reporting of intersegment cost of sales. See Note 7 to the consolidated financial statements.

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**NORTHROP GRUMMAN CORPORATION**

For ease of understanding the items that drive changes in our consolidated cost of sales, we have presented below an analysis of sales and cost of sales by segment and the non-segment factors that impact our consolidated amounts:

*Cost of Sales Elements by Segment and Non-Segment Factors:*

<i>\$ in millions</i>	Year Ended December 31					
	2011		2010		2009	
<b>Segment Information:</b>	<b>Sales</b>	<b>Cost of Sales</b>	Sales	Cost of Sales	Sales	Cost of Sales
<b>Aerospace Systems</b>						
Product	\$ 9,179	\$ 8,058	\$ 9,779	\$ 8,676	\$ 9,346	\$ 8,370
Services	1,279	1,139	1,131	978	1,073	978
<b>Electronic Systems</b>						
Product	6,041	5,161	6,410	5,479	6,543	5,642
Services	1,331	1,141	1,203	1,111	1,128	1,060
<b>Information Systems</b>						
Product	486	430	535	476	687	613
Services	7,435	6,725	7,860	7,163	7,849	7,299
<b>Technical Services</b>						
Product	23	20	20	19	17	16
Services	2,676	2,463	3,210	3,005	2,759	2,599
<b>Segment Totals</b>						
Total Product	\$ 15,729	\$ 13,669	\$ 16,744	\$ 14,650	\$ 16,593	\$ 14,641
Total Services	12,721	11,468	13,404	12,257	12,809	11,936
Intersegment eliminations	(2,038)	(1,780)	(2,005)	(1,774)	(1,752)	(1,562)
<b>Total Segment</b>	<b>\$ 26,412</b>	<b>\$ 23,357</b>	<b>\$ 28,143</b>	<b>\$ 25,133</b>	<b>\$ 27,650</b>	<b>\$ 25,015</b>
<b>Non-segment Factors:</b>						
Unallocated corporate expenses		166		182		100
Net pension adjustment		(400)		(10)		237
Royalty income adjustment		13		11		24
<b>Consolidated total</b>	<b>\$ 26,412</b>	<b>\$ 23,136</b>	<b>\$ 28,143</b>	<b>\$ 25,316</b>	<b>\$ 27,650</b>	<b>\$ 25,376</b>

*Cost of Segment Product Sales*

2011 – Cost of segment product sales in 2011 decreased by \$981 million and a 60 basis point reduction as a percentage of product sales as compared to 2010, due to the overall decline in sales for the period across all of the segments other than Technical Services. Aerospace Systems’ sales volume declined by \$600 million largely due to sales declines in Space Systems (\$388 million) and Strike & Surveillance Systems (\$255 million), partially offset by sales increases in Battle Management & Engagement Systems and Advanced Programs & Technology (approximately \$90 million each). Margin rates improved at Aerospace Systems by 90 basis points primarily due to net favorable performance improvements on programs and lower amortization of purchased intangibles in 2011. Sales volume at Electronic Systems decreased \$369 million largely due to lower volume in the Land & Self Protection and Navigation Systems business areas. Margin rates at Electronic Systems remained consistent in 2011, primarily due to performance improvements on programs nearing completion in the Land & Self Protection and Intelligence and Surveillance business areas, offset by provisions for workforce reductions.

2010 – Cost of segment product sales of \$14.7 billion in 2010 was flat versus 2009 consistent with the relatively flat year-over-year segment sales. Cost of product sales at Aerospace Systems increased due to sales volume increases at Strike and Surveillance of \$218 million and Battle Management and Engagement Systems of \$517 million, offset by volume decreases at the Advanced Programs & Technology business area of \$315 million.

## **NORTHROP GRUMMAN CORPORATION**

Product sales at Information Systems decreased in volume by approximately 22% primarily due to \$210 million in sales volume that transitioned from product to service activity in 2010. Electronic Systems product sales volume decreased \$133 million during the period, and product cost of sales decreased by \$163 million reflecting performance improvement in land and self protection programs, higher volume in Targeting Systems, and lower operating loss provisions in postal automation programs.

### *Cost of Segment Service Revenues*

2011 – Cost of service revenues in 2011 decreased by \$789 million and 130 basis points as a percentage of service revenues as compared to 2010, due to the overall decline in sales for the period and margin rate improvements at Information Systems, Technical Services and Electronic Systems, offset somewhat by an unfavorable margin rate change at Aerospace Systems. Contributing to the overall decline in revenues was the company's participation in the NSTec joint venture, which resulted in the deconsolidation of this business in 2011. NSTec contributed revenues of \$579 million and segment cost of sales of \$559 million in 2010 when it was included in Technical Service's sales, thus driving a 80 basis point improvement in margin rate for this segment. More modest margin rate improvements at Electronic Systems and Information Systems effectively offset the decline in margin rate at the Aerospace Systems business.

2010 – Cost of segment service revenues of \$12.3 billion in 2010 was up over 2009 by \$321 million due to increased volume, which resulted in an increase in sales from \$12.8 billion in 2009 to \$13.4 billion in 2010. The sales volume increase was due principally to Technical Services' contract volume, driven by the KC-10 and C-20 contracts, which together increased by \$307 million. Segment service margin rates across all segments improved in 2010, with Information Systems being the primary contributor as it experienced higher margin rates at its Civil Systems division, and due to the absence of non-recurring costs of \$37 million from the sale of ASD in 2009. Overall, Information Systems experienced a 186 basis point margin rate improvement.

### *Unallocated Corporate Expenses*

Unallocated corporate expenses generally include the portion of corporate expenses not considered allowable or allocable under applicable CAS and FAR rules, and therefore not allocated to the segments, such as management and administration, legal, environmental, certain compensation and retiree benefits, and other expenses. Unallocated corporate expenses for 2011 decreased \$16 million, or 9 percent, as compared with 2010, primarily due to a decrease in stock-based compensation. Unallocated corporate expenses for 2010 increased \$82 million, or 82 percent, as compared with 2009, primarily due to inclusion of a \$64 million net gain from a legal settlement in 2009, as well as an increase in environmental, health and welfare, and stock-based compensation expenses in 2010.

### *Net Pension Adjustment*

Net pension adjustment reflects the difference between pension expenses determined in accordance with GAAP and pension expense allocated to the operating segments determined in accordance with CAS. For 2011 and 2010, the net pension adjustment resulted in income of \$400 million and \$10 million, respectively. The increase in net pension adjustment for both years is due to decreased GAAP pension expense, primarily resulting from higher estimated returns on higher pension plan assets as of the beginning of the year.

### *Royalty Income Adjustment*

Royalty income is included in segment operating income and reclassified to other income for financial reporting purposes.

### *General and Administrative Expenses*

In accordance with industry practice and the regulations that govern the cost accounting requirements for government contracts, most general corporate expenses incurred at both the segment and corporate locations are considered allowable and allocable costs on government contracts. For most components of the company, these costs are allocated to contracts in progress on a systematic basis and contract performance factors therefore include this cost component as an element of cost. General and administrative expenses primarily relate to segment operations.

## **NORTHROP GRUMMAN CORPORATION**

*2011* – General and administrative expenses for 2011 decreased \$117 million, or 5 percent, compared to 2010, primarily due to overall reductions in administrative costs due to cost reduction initiatives, lower bid and proposal costs and lower research and development expenses. General and administrative expenses as a percentage of total sales and service revenues was 9 percent for 2011, consistent with 2010.

*2010* – General and administrative expenses for 2010 decreased \$104 million, or 4 percent, compared to 2009 primarily due to the disposition of ASD in 2009 at Information Systems. The decrease in general and administrative expenses as a percentage of total sales and service revenues for 2010, as compared to 2009, is primarily due to cost reductions realized from the 2009 streamlining of our organizational structure, which reduced the number of operating segments.

### **Interest Expense**

*2011* – Interest expense for 2011 decreased \$48 million, as compared to 2010, primarily due to a lower weighted average interest rate resulting from our debt refinancing in November 2010.

*2010* – Interest expense in 2010 was comparable to 2009.

### **Charge on Debt Redemption**

*2010* – In November 2010, we repurchased outstanding debt and recorded a pre-tax charge of \$229 million as other expense primarily related to premiums paid on the debt tendered. See Liquidity and Capital Resources below and Note 13 to our consolidated financial statements in Part II, Item 8.

### **Federal and Foreign Income Taxes**

*2011* – Our effective tax rate on earnings from continuing operations for 2011 was 32.3 percent, as compared with 19.5 percent in 2010. In 2010, we recognized net tax benefits of \$298 million to reflect the final approval from the IRS and the U.S. Congressional Joint Committee on Taxation (Joint Committee) of the IRS' examination of our tax returns for the years 2004 through 2006.

*2010* – Our effective tax rate on earnings from continuing operations for 2010, was 19.5 percent compared with 30.7 percent in 2009. In 2010, we recognized net tax benefits of \$298 million to reflect the final approval of the IRS's examination of our tax returns for years 2004 through 2006, as discussed above. In 2009, we recognized net tax benefits of \$75 million primarily as a result of a final settlement with the IRS Office of Appeals and the Joint Committee related to our tax returns for years ended 2001 through 2003.

Excluding the effects of the \$298 million net tax benefit in 2010 and the \$75 million net tax benefit in 2009, our effective tax rates would have been 32.1 percent and 34.3 percent in 2010 and 2009, respectively.

### **Cash Provided by Operating Activities**

*2011* – Cash provided by continuing operations in 2011 was \$2.3 billion, as compared with \$2.1 billion in 2010, and reflects lower tax payments and timing of trade working capital. In 2011, we contributed \$1.1 billion to our pension plans, of which \$1.0 billion was voluntarily pre-funded, as compared with \$789 million in 2010, of which \$728 million was voluntarily pre-funded. Income taxes paid, net of refunds, was \$810 million in 2011, as compared with \$1.1 billion in 2010. Cash provided by continuing operations for 2011 included \$30 million of federal and state income tax refunds and \$9 million of interest income received.

*2010* – Cash provided by continuing operations in 2010 was \$2.1 billion as compared with \$2 billion in 2009, and reflects higher cash paid to our suppliers offset by lower tax payments, primarily due to \$508 million for taxes paid in 2009 related to the sale of ASD. In 2010, we contributed \$789 million to our pension plans, of which \$728 million was voluntarily pre-funded, as compared with \$657 million in 2009, of which \$601 million was voluntarily pre-funded. Income taxes paid, net of refunds, was \$1.1 billion in 2010, as compared with \$1.3 billion in 2009. Cash provided by continuing operations for 2010 included \$94 million of federal and state income tax refunds and \$11 million of interest income received.

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We are aligned into four reportable segments: Aerospace Systems, Electronic Systems, Information Systems and Technical Services. See Note 7 in Part II, Item 8 for more information about our segments.

In January 2010, we transferred our internal information technology services unit from the Information Systems segment to our corporate shared services group. The intersegment sales and operating income for this unit that were previously recognized in the Information Systems segment are immaterial and have been eliminated for the years presented.

<i>\$ in millions</i>	Year ended December 31		
	2011	2010	2009
<b>Sales and Service Revenues</b>			
Aerospace Systems	\$ 10,458	\$ 10,910	\$ 10,419
Electronic Systems	7,372	7,613	7,671
Information Systems	7,921	8,395	8,536
Technical Services	2,699	3,230	2,776
Intersegment eliminations	(2,038)	(2,005)	(1,752)
<b>Total sales and service revenues</b>	<b>\$26,412</b>	<b>\$ 28,143</b>	<b>\$27,650</b>

<i>\$ in millions</i>	Year ended December 31		
	2011	2010	2009
<b>Operating Income</b>			
Aerospace Systems	\$1,261	\$ 1,256	\$ 1,071
Electronic Systems	1,070	1,023	969
Information Systems	766	756	624
Technical Services	216	206	161
Intersegment eliminations	(258)	(231)	(190)
<b>Total Segment Operating Income</b>	<b>3,055</b>	<b>3,010</b>	<b>2,635</b>
Non-segment factors affecting operating income			
Unallocated corporate expenses	(166)	(182)	(100)
Net pension adjustment	400	10	(237)
Royalty income adjustment	(13)	(11)	(24)
<b>Total operating income</b>	<b>\$3,276</b>	<b>\$ 2,827</b>	<b>\$ 2,274</b>

**KEY SEGMENT FINANCIAL MEASURES****Sales and Service Revenues**

Period-to-period sales reflect performance under new and ongoing contracts. Changes in sales and service revenues are typically expressed in terms of volume. Unless otherwise described, volume generally refers to increases (or decreases) in reported revenues incurred due to varying production activity levels, delivery rates, or service levels on individual contracts. Volume changes will typically carry a corresponding operating income change based on the margin rate for a particular contract.

**Segment Operating Income**

Segment operating income reflects the aggregate performance results of contracts within a business area or segment. Excluded from this measure are certain costs not directly associated with contract performance, including

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## NORTHROP GRUMMAN CORPORATION

the portion of corporate expenses such as management and administration, legal, environmental, certain compensation costs and other retiree benefits, and other expenses not considered allowable or allocable under applicable CAS regulations and the FAR, and therefore not allocated to the segments. Changes in segment operating income are typically expressed in terms of volume, as discussed above, or performance.

Performance refers to changes in contract margin rates for the period. These changes typically relate to profit recognition associated with revisions to total estimated costs at completion of the contract (EAC) that reflect improved (or deteriorated) operating performance on a particular contract. Operating income changes are accounted for on a cumulative catch-up basis at the time an EAC change is recorded. We identify favorable and unfavorable adjustments to determine our qualitative discussion of performance results and, where meaningful, we disclose the effects of such adjustments on a contract or program basis.

Operating income may also be affected by, among other things, the effects of workforce stoppages, natural disasters (such as earthquakes), resolution of disputed items with the customer, recovery of insurance proceeds, and other discrete events. At the completion of a long-term contract, any originally estimated costs not incurred or reserves not fully utilized (such as warranty reserves) could also impact contract earnings. Where such items have occurred and the effects are meaningful, a separate description is provided.

Changes in estimates related to our contracts accounted for using the percentage-of-completion method are recorded using the cumulative catch-up method of accounting. The aggregate effects of these favorable and unfavorable changes across our portfolio of numerous contracts can have a significant effect upon our reported sales and operating income in each of our reporting periods. In 2011, 2010 and 2009, we recognized favorable operating income adjustments of \$1.1 billion, \$945 million and \$758 million, and unfavorable operating income adjustments of \$385 million, \$270 million and \$337 million, respectively, consisting of cumulative catch-up adjustments from the use of the percentage-of-completion method of accounting.

For a more complete understanding of each segment's product and services, see the business descriptions in Part I, Item 1.

### Program Descriptions

For convenience, a brief description of certain programs discussed in this Form 10-K are included in the "Glossary of Programs" at the end of Part II, Item 7.

## AEROSPACE SYSTEMS

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	<b>\$10,458</b>	\$10,910	\$10,419
Segment operating income	<b>1,261</b>	1,256	1,071
<i>As a percentage of segment sales</i>	<b>12.1%</b>	11.5%	10.3%

### Sales and Service Revenues

2011 – Aerospace Systems revenue decreased \$452 million, or 4 percent, as compared with 2010. The decrease is primarily due to \$388 million lower sales in Space Systems (SS) and \$255 million lower sales in Strike & Surveillance Systems (S&SS), partially offset by \$90 million higher sales in Battle Management & Engagement Systems (BM&ES) and \$87 million higher sales in Advanced Programs & Technology (AP&T). The lower sales at SS are primarily due to reduced funding for weather satellite programs and the James Webb Space Telescope (JWST), as well as lower volume for several other space programs. The lower sales at S&SS are primarily due to lower volume on the F-35 Lightning II (F-35) manned aircraft program, which transitioned to a units-of-delivery revenue recognition method beginning with low rate initial production lot 5, and the completion of the aerial targets program. The higher sales at BM&ES are primarily due to higher volume on Long Endurance Multi-Intelligence Vehicle (LEMV) and Joint Surveillance Target Attack Radar System (JSTARS), partially offset by lower volume on EA-18G. The higher sales at AP&T are primarily due to increased volume on restricted programs.

## NORTHROP GRUMMAN CORPORATION

2010 – Aerospace Systems revenue increased \$491 million, or 5 percent, as compared with 2009. The increase is primarily due to \$517 million higher sales in BM&ES and \$218 million higher sales in S&SS, partially offset by \$315 million lower sales in AP&T. The increase at BM&ES is due to higher sales volume on the Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft System, EA-6B, EA-18G, E-2 Hawkeye, and LEMV programs. The increase at S&SS is primarily due to higher sales volume associated with manned and unmanned aircraft programs, such as the Global Hawk High-Altitude Long-Endurance (HALE) Systems, the F-35, B-2 Stealth Bomber and F/A-18, partially offset by the termination of the Kinetic Energy Interceptor (KEI) program in 2009 and decreased activity on the Intercontinental Ballistic Missile (ICBM) program. The decrease at AP&T is primarily due to lower sales volume on restricted programs and the Navy Unmanned Combat Air System (N-UCAS) program.

### Segment Operating Income

2011 – Aerospace Systems operating income increased \$5 million, or less than 1 percent, as compared with 2010. The increase is primarily due to improved performance across several programs at Aerospace Systems and lower amortization expense on purchased intangibles, partially offset by an unfavorable adjustment for performance incentives on a space program at SS and overall lower sales volume discussed above.

2010 – Aerospace Systems operating income increased \$185 million, or 17 percent, as compared with 2009, and as a percentage of sales increased 120 basis points. The increase is primarily due to net performance improvements across various programs, principally within SS, and the higher sales volume discussed above.

## ELECTRONIC SYSTEMS

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	\$7,372	\$7,613	\$7,671
Segment operating income	1,070	1,023	969
<i>As a percentage of segment sales</i>	<i>14.5%</i>	<i>13.4%</i>	<i>12.6%</i>

### Sales and Service Revenues

2011 – Electronic Systems revenue decreased \$241 million, or 3 percent, as compared with 2010. The decrease was primarily due to \$325 million lower sales in Land & Self Protection Systems, partially offset by \$65 million higher sales in Advanced Concepts & Technologies (AC&T). The lower sales in Land & Self Protection Systems are primarily due to fewer deliveries on Large Aircraft Infrared Countermeasures (LAIRCM) and Vehicular Intercommunications Systems (VIS) programs. The higher sales in AC&T are primarily due to increased volume on restricted programs.

2010 – Electronic Systems revenue decreased \$58 million, or less than 1 percent, as compared with 2009. The decrease is primarily due to \$150 million lower sales in Land & Self Protection Systems, \$84 million lower sales in Intelligence, Surveillance & Reconnaissance (ISR) Systems and \$82 million lower sales in Naval & Marine Systems, partially offset by \$186 million higher sales in Targeting Systems and \$72 million higher sales in Advanced Concepts & Technologies. The decrease in Land & Self Protection Systems is due to lower sales volume on the Ground/Air Task Oriented Radar (G/ATOR) program as it transitions from the development phase to the integration and test phase and lower unit deliveries on the VIS program. The decrease in ISR Systems is due to lower sales volume on the Space Based Infrared Systems (SBIRS) program as it transitions to follow-on production, postal automation programs and various international programs. The decrease in Naval & Marine Systems is due to lower volume on the ship-board Cobra Judy replacement radar program. The increase in Targeting Systems is due to higher sales volume on the F-35, various laser systems and restricted programs and increased unit deliveries of the LITENING targeting pod system. The increase in Advanced Concepts & Technologies is primarily due to volume on restricted programs.



**NORTHROP GRUMMAN CORPORATION****Segment Operating Income**

2011 – Electronic Systems operating income increased \$47 million, or 5 percent, as compared to 2010, and as a percentage of sales increased 110 basis points. The higher operating income is primarily due to performance improvements on several contracts nearing completion in Land & Self Protection Systems and Intelligence, Surveillance & Reconnaissance programs. The improved program performance was partially offset by reserves established in 2011 for reductions in workforce and a reserve on a program related to outstanding contractual issues as the contract nears completion, and overall lower sales volume described above.

2010 – Electronic Systems operating income increased \$54 million, or 6 percent, as compared with 2009. The increase is primarily due to net performance improvements in land and self protection programs, higher volume in Targeting Systems, and lower operating loss provisions in postal automation programs.

**INFORMATION SYSTEMS**

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	\$7,921	\$8,395	\$8,536
Segment operating income	766	756	624
<i>As a percentage of segment sales</i>	9.7%	9.0%	7.3%

**Sales and Service Revenues**

2011 – Information Systems revenue decreased \$474 million, or 6 percent, as compared with 2010. The decrease is primarily due to \$327 million lower sales in Defense Systems and \$99 million lower sales in Civil Systems. The decrease in Defense Systems is primarily due to lower sales volume from Force Protection Security System (FPS2), Saudi Arabian American Oil Company (ARAMCO), Netcents DKO, F-22 and several other programs, partially offset by higher volume on Encore II and Trailer Mounted Support System (TMSS) programs. The lower sales volume in Civil Systems is primarily due to the sale of the County of San Diego contract, which reduced sales by \$70 million as compared to the same period in 2010, lower volume on the Enterprise Network Management program, and completion of the Treasury Communications System program in 2010.

2010 – Information Systems revenue decreased \$141 million, or 2 percent, as compared with 2009. The decrease is primarily due to \$130 million lower sales in Intelligence Systems and \$57 million lower sales in Civil Systems, partially offset by \$55 million higher sales in Defense Systems. The decrease in Intelligence Systems is primarily due to lower sales volume on restricted programs and the loss of the Navstar Global Positioning System Operational Control Segment (GPS OCX) program. The decrease in Civil Systems is primarily due to lower sales volume on the New York City Wireless (NYCWIn) and Armed Forces Health Longitudinal Technology Application (AHLTA) programs. The increase in Defense Systems is primarily due to program growth on Battlefield Airborne Communications Node (BACN), Joint National Integration Center Research and Development Contract (JRDC) and Integrated Battle Command System (IBCS) activities, partially offset by lower sales volume on the TMSS program as it nears completion, and decreased Systems and Software Engineer Support activities.

**Segment Operating Income**

2011 – Information Systems operating income increased \$10 million, or 1 percent, as compared with 2010. The increase is primarily driven by improved performance on several civil systems programs, including the Virginia IT Outsource (VITA) contract and the effect of the sale of the County of San Diego contract, partially offset by the lower sales volume primarily at Defense Systems described above.

2010 – Information Systems operating income increased \$132 million, or 21 percent, as compared with 2009 and as a percentage of sales increased 170 basis points. The increase is primarily due to performance improvements on Civil Systems programs. In 2009, operating income included \$37 million of non-recurring costs associated with the sale of ASD.

**NORTHROP GRUMMAN CORPORATION****TECHNICAL SERVICES**

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	\$ 2,699	\$3,230	\$2,776
Segment operating income	216	206	161
<i>As a percentage of segment sales</i>	<b>8.0%</b>	6.4%	5.8%

**Sales and Service Revenues**

2011 – Technical Services revenue decreased \$531 million, or 16 percent, as compared with 2010. The decrease is primarily due to \$626 million lower sales in Defense and Government Services Division (DGSD) and \$87 million lower sales in Training Solutions Division (TSD), partially offset by higher sales of \$182 million in Integrated Logistics and Modernization Division (ILMD). The lower sales in DGSD are primarily due to the reduced participation in the NSTec joint venture. Effective January 1, 2011, the company reduced its participation in this joint venture, resulting in no sales recorded for the joint venture for 2011, compared with sales of \$579 million in 2010. The lower sales in TSD are primarily due to lower volume on the Joint Warfighting Center and Africa Contingency Operations Training & Assistance programs and lower volume on completion of the Global Linguists Solutions program. The higher sales in ILMD are primarily due to increased activity on the KC-10 program, which began in February 2010.

2010 – Technical Services revenue increased \$454 million, or 16 percent, as compared with 2009. The increase is primarily due to \$379 million higher sales in the ILMD. The increase in ILMD is primarily due to the continued ramp-up of the recently awarded KC-10 and C-20 programs.

**Segment Operating Income**

2011 – Operating income at Technical Services increased \$10 million, or 5 percent, as compared with 2010 and as a percentage of sales increased 160 basis points. The increase is primarily due to effects of the change in participation in the NSTec joint venture and performance improvements on several ILMD and DGSD programs, partially offset by unfavorable program performance on KC-10 and lower sales volume on certain TSD programs.

2010 – Operating income at Technical Services increased \$45 million, or 28 percent, as compared with 2009. The increase is primarily due to the higher sales volume discussed above. Operating income as a percentage of sales increased 60 basis points and reflects improved program performance and business mix changes.

**BACKLOG****Definition**

Total backlog at December 31, 2011, was approximately \$39.5 billion. Total backlog includes both funded backlog (firm orders for which funding is contractually obligated by the customer) and unfunded backlog (firm orders for which funding is not currently contractually obligated by the customer). Unfunded backlog excludes unexercised contract options and unfunded indefinite delivery indefinite quantity (IDIQ) orders (except for authorized task orders, which are included up to the authorized value). For multi-year services contracts with non-federal government customers having no stated contract values, backlog includes only the amounts committed by the customer.

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The following table presents funded and unfunded backlog by segment for the year ended December 31, 2011 and total backlog for the year ended December 31, 2010:

<i>\$ in millions</i>	2011			2010
	Funded	Unfunded	Total Backlog	Total Backlog
Aerospace Systems	\$ 9,614	\$ 9,623	\$19,237	\$20,868
Electronic Systems	7,307	1,816	9,123	10,147
Information Systems	4,123	4,440	8,563	10,590
Technical Services	2,156	436	2,592	5,237
Total backlog	\$23,200	\$16,315	\$ 39,515	\$ 46,842

Backlog is converted into the following years' sales as costs are incurred or deliveries are made. Approximately 59 percent of the \$39.5 billion total backlog at December 31, 2011, is expected to be converted into sales in 2012. Total U.S. Government orders, including those made on behalf of foreign governments, comprised 87 percent of the total backlog at the end of 2011. Total foreign customer orders accounted for 7 percent of the total backlog at the end of 2011. Domestic commercial backlog represented 6 percent of total backlog at the end of 2011.

**Backlog Adjustments**

In the fourth quarter of 2011, we changed our backlog measurement criteria to include a valuation adjustment for open, unfulfilled contracts that in our judgment, may not be converted to future sales, but which have not been closed or de-obligated by the customer. Under our prior criteria, backlog represented remaining work effort to be incurred on signed contracts in process; or open contract value generally related to either: 1) work scope not fully utilized by the customer, and 2) open contract value related to the close-out of overhead claim years. Based on this prior criteria, backlog was reduced as revenue was recognized or as the customer took contract action to close contracts and/or de-obligate funds. Our recent experience indicates that our customers have not been timely in taking the aforementioned contract actions. Accordingly, effective December 31, 2011, we have modified our criteria to include the recognition of a valuation reserve to adjust our outstanding backlog to reflect our future contract revenue expectations. The effects of this change in procedures reduced December 31, 2011 backlog by \$3 billion, including a reduction in the backlog at Information Systems by \$2.3 billion and Technical Services by \$725 million.

*2011* – Total backlog was reduced by \$1.7 billion at Technical Services to reflect a change in the company's participation in the NSTec joint venture effective January 1, 2011, at which time the NSTec joint venture results were no longer consolidated into the company's consolidated financial statements. Total backlog was also reduced by an aggregate of \$1.5 billion at Aerospace Systems to reflect restructuring and termination of certain space programs.

*2010* – A \$1.1 billion reduction in backlog was recorded in 2010 as a result of the restructure of the NPOESS program at our Aerospace Systems segment.

Backlog was also impacted in 2010 by an agreement we reached with the Commonwealth of Virginia related to the VITA contract. The agreement defined minimum revenue amounts for the remaining years under the base contract and extended the contract for three additional years through 2019. We recorded a favorable backlog adjustment of \$824 million for the definitization of the base contract revenues for years 2011 through 2016, while the contract extension and 2010 portion of the base contract revenues, totaling \$802 million, were recorded as new awards in the period in our Information Systems segment.

**NORTHROP GRUMMAN CORPORATION****New Awards**

2011 –The estimated value of contract awards added to backlog during the year ended December 31, 2011, is \$25.3 billion. Significant new awards during this period include \$2.0 billion for F/A-18 program, \$1.1 billion for E2-D Advanced Hawkeye program, \$1.0 billion for Global Hawk program, \$1.1 billion for B-2 program, \$886 million for F-35 program, and \$404 million for KC-10 program.

2010 –The estimated value of contract awards added to backlog during the year ended December 31, 2010, was \$26.4 billion. Significant new awards during this period include \$1.2 billion for the Global Hawk HALE program, \$979 million for the E-2 Hawkeye programs, \$942 million for the AEHF program, \$802 million for the VITA program, \$677 million for the Joint National Integration Center Research and Development contract, \$656 million for the F/A 18 Hornet Strike Fighter program, \$654 million for the ICBM program, \$631 million for the B-2 Stealth Bomber programs, \$579 million for the F-35 program, \$565 million for the NSTec program, \$507 for the KC-10 program, \$505 million for the Large Aircraft Infrared Counter-measures programs and various restricted awards.

**LIQUIDITY AND CAPITAL RESOURCES**

We endeavor to ensure the most efficient conversion of operating results into cash for deployment in growing our businesses and maximizing shareholder value. We actively manage our capital resources through working capital improvements, capital expenditures, strategic business acquisitions and divestitures, debt issuance and repayment, required and voluntary pension contributions, returning cash to our shareholders through dividend payments, and repurchases of common stock. In addition to our cash position, we use various financial measures to assist in capital deployment decision-making, including, but not limited to, cash provided by operations, free cash flow, and debt-to-EBITDA ratio. We believe these measures are useful to investors in assessing our financial performance.

As of December 31, 2011, the amount of cash, cash equivalents, and marketable securities held outside of the U.S. by foreign subsidiaries was \$546 million. At the present time, we do not anticipate repatriating these balances to fund domestic operations.

The table below summarizes key components of operating cash flow for continuing operations:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Net earnings	<b>\$2,118</b>	\$ 2,053	\$ 1,686
Earnings from discontinued operations, net of tax	<b>(32)</b>	(134)	(234)
Gain on sale of business		(10)	(446)
Charge on debt redemption		229	
Other non-cash items <sup>(1)</sup>	<b>1,108</b>	758	857
Retiree benefit funding less than (in excess of) expense	<b>(904)</b>	(354)	60
Trade working capital change	<b>57</b>	(486)	72
Cash provided by continuing operations	<b>\$2,347</b>	\$2,056	\$1,995

(1) Includes depreciation and amortization, stock based compensation expense and deferred taxes.

**Free Cash Flow**

Free cash flow from continuing operations is a non-GAAP financial measure and is calculated as cash provided by operating activities from continuing operations less capital expenditures and outsourcing contract and related software costs. Outsourcing contract and related software costs are similar to capital expenditures in that the contract costs represent incremental external costs or certain specific internal costs that are directly related to the contract acquisition and transition/set-up. These outsourcing contract and related software costs are deferred and expensed over the contract's period of performance. We believe free cash flow from continuing operations is a useful measure for investors to consider. This measure is a key factor in our planning for and consideration of strategic acquisitions, stock repurchases and the payment of dividends.

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[Table of Contents](#)**NORTHROP GRUMMAN CORPORATION**

Free cash flow from continuing operations is not a measure of financial performance under GAAP, and may not be defined and calculated by other companies in the same manner. This measure should not be considered in isolation, as a measure of residual cash flow available for discretionary purposes, or as an alternative to operating results presented in accordance with GAAP as indicators of performance.

The table below reconciles cash provided by continuing operations to free cash flow from continuing operations:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Cash provided by continuing operations	<b>\$2,347</b>	\$2,056	\$1,995
Less:			
Capital expenditures	<b>(488)</b>	(579)	(473)
Outsourcing contract and related software costs	<b>(4)</b>	(6)	(68)
Free cash flow from continuing operations	<b>\$ 1,855</b>	\$ 1,471	\$ 1,454

**Cash Flows**

The following is a discussion of our major operating, investing and financing activities from continuing operations for each of the three years in the period ended December 31, 2011, as classified on the consolidated statements of cash flows in Part II, Item 8.

**Operating Activities**

*2011* – Cash provided by continuing operations in 2011 increased \$291 million, as compared to 2010, primarily due to lower tax payments and changes in trade working capital, partially offset by higher pension plan contributions. In 2011, pension plan contributions totaled \$1.1 billion, of which \$1 billion was voluntarily pre-funded.

In 2012, we expect to contribute the required minimum funding level of approximately \$65 million to our pension plans and approximately \$120 million to our other post-retirement benefit plans. We expect our cash on hand and cash generated from operations for 2012 to be sufficient to service debt and contract obligations, finance capital expenditures, continue acquisition of shares under the share repurchase program, and continue paying dividends to our shareholders. Although 2012 cash from operations is expected to be sufficient to service these obligations, we may borrow under credit facilities to accommodate timing differences in cash flows. We have an aggregate commitment of \$2 billion available under two revolving credit facilities that can be accessed on a same-day basis. Both facilities are currently undrawn and had no borrowings during the year ended December 31, 2011. Additionally, we believe we could access capital markets for debt financing for longer-term funding, under current market conditions, if needed.

*2010* – Cash provided by continuing operations in 2010 increased \$61 million as compared with 2009, primarily the result of lower tax payments. Pension plan contributions totaled \$789 million in 2010, of which \$728 million was voluntarily pre-funded. In 2009, cash provided by continuing operations included \$508 million for taxes paid related to the sale of ASD.

*2009* – Cash provided by continuing operations in 2009 decreased \$710 million as compared with 2008, reflecting higher voluntary pension contributions and increased income taxes paid resulting from the sale of ASD. Pension plan contributions totaled \$657 million in 2009, of which \$601 million was voluntarily pre-funded.

**Investing Activities**

*2011* – Net cash provided by investing activities of continuing operations was \$743 million in 2011, reflecting a \$1.4 billion contribution received from the spin-off of Shipbuilding business in 2011, partially offset by \$488 million of capital expenditures and a \$250 million investment in short term investments. Capital expenditure commitments at December 31, 2011, of approximately \$293 million are expected to be paid with cash on hand.

## **NORTHROP GRUMMAN CORPORATION**

*2010* – Net cash used in investing activities by continuing operations was \$571 million in 2010 and reflects \$579 million of capital expenditures, which includes \$57 million of capitalized software costs.

*2009* – Cash provided by investing activities by continuing operations was \$1.1 billion in 2009. During 2009, we received \$1.65 billion in proceeds from the sale of ASD (see Note 6 to our consolidated financial statements in Part II, Item 8), paid \$68 million for outsourcing costs related to outsourcing services contracts, and paid \$33 million to acquire Sonoma Photonics, Inc. and the assets from Swift Engineering’s Killer Bee Unmanned Air Systems product line (see Note 5 to our consolidated financial statements in Part II, Item 8). Capital expenditures in 2009 were \$473 million, which includes \$36 million of capitalized software costs.

### **Financing Activities**

*2011* – Net cash used in financing activities by continuing operations in 2011 was \$3.5 billion and reflects \$2.3 billion in repurchases of common stock, \$768 million in debt payments, and \$543 in cash dividends paid.

*2010* – Net cash used in financing activities by continuing operations in 2010 was \$1.1 billion and reflects \$1.2 billion in repurchases of common stock, \$1 billion in debt payments, including the redemption of \$682 million of higher coupon debt and \$229 million of fees and associated premiums paid to the tendering holders of these debt securities, and \$545 million in cash dividends paid. These financing related cash outflows were partially offset by \$1.5 billion in net proceeds from new debt issuances. See Note 13 to the consolidated financial statements in Part II, Item 8.

*2009* – Net cash used in financing activities by continuing operations in 2009 was \$1.2 billion and reflects \$1.1 billion in repurchases of common stock, \$539 million in cash dividends paid, and \$474 million in debt payments. These financing related cash outflows were partially offset by \$843 million in net proceeds from new debt issuance in 2009.

*Share Repurchases* – We repurchased 40.2 million, 19.7 million, and 23.1 million shares in 2011, 2010, and 2009, respectively. See Purchases of Equity Securities by Issuer and Affiliated Purchasers in Part II, Item 5 and Note 4 to the consolidated financial statements in Part II, Item 8 for a discussion concerning our common stock repurchases.

### **Credit Facilities**

In September 2011, the company entered into two senior unsecured credit facilities (the Credit Agreements) in an aggregate principal amount of \$2 billion. The first Credit Agreement amended the company’s \$2 billion five-year credit facility dated August 10, 2007, by reducing the aggregate principal amount available under the facility by \$500 million to \$1.5 billion and extending the maturity date to September 2016. The second Credit Agreement is a new 364-day revolving credit facility in an aggregate principal amount of \$500 million.

The Credit Agreements contain covenants substantially similar to those of the previous five-year credit facility, which restrict the company’s ability to sell all or substantially all of its assets, merge or consolidate with another entity or undertake other fundamental changes and incur liens. The company also cannot permit the ratio of its consolidated debt to capitalization (as set forth in the Credit Agreements) to exceed 65 percent. The company is in compliance with all covenants under the Credit Agreements. At December 31, 2011, there was no balance outstanding under either of these credit facilities.

### **Other Sources and Uses of Capital**

*Additional Capital* – We believe we can obtain additional capital, if necessary for long-term liquidity, from such sources as the public or private capital markets, the sale of assets, sale and leaseback of operating assets, and leasing rather than purchasing new assets. We have an effective shelf registration statement on file with the SEC.

We expect that cash on hand at the beginning of the year plus cash generated from continuing operations supplemented by borrowings under credit facilities and in the capital markets, if needed, will be sufficient in 2012 to service debt and contract obligations, finance capital expenditures, pay federal, foreign, and state income taxes, fund required and voluntary pension and other post retirement benefit plan contributions, continue acquisition of

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**NORTHROP GRUMMAN CORPORATION**

shares under the share repurchase program, and continue paying dividends to shareholders. We will continue to assess potential ramifications of the U.S. Government's spending reduction initiatives as previously discussed. These reductions could have a significant impact on our business and our overall financial results.

*Financial Arrangements* – In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks and surety bonds issued principally by insurance companies to guarantee the performance on certain obligations. At December 31, 2011, there were \$195 million of stand-by letters of credit, \$186 million of bank guarantees, and \$139 million of surety bonds outstanding.

**Contractual Obligations**

The following table presents our contractual obligations as of December 31, 2011, and the estimated timing of future cash payments:

<i>\$ in millions</i>	Total	2012	2013 - 2014	2015 - 2016	2017 and beyond
Long-term debt	<b>\$ 3,929</b>	\$ 5	\$ 358	\$ 611	\$2,955
Interest payments on long-term debt	<b>2,692</b>	207	414	374	1,697
Operating leases	<b>1,219</b>	297	442	312	168
Purchase obligations <sup>(1)</sup>	<b>6,992</b>	4,554	1,719	580	139
Other long-term liabilities <sup>(2)</sup>	<b>877</b>	97	223	114	443
Total contractual obligations	<b>\$15,709</b>	\$5,160	\$3,156	\$1,991	\$ 5,402

- (1) A "purchase obligation" is defined as an agreement to purchase goods or services that is enforceable and legally binding on us and that specifies all significant terms, including: fixed or minimum quantities to be purchased; fixed, minimum, or variable price provisions; and the approximate timing of the transaction. These amounts are primarily comprised of open purchase order commitments to vendors and subcontractors pertaining to funded contracts.
- (2) Other long-term liabilities primarily consist of total accrued environmental reserves, deferred compensation, and other miscellaneous liabilities, of which \$86 million is related to environmental reserves recorded in other current liabilities. It excludes obligations for uncertain tax positions of \$135 million, as the timing of such payments, if any, cannot be reasonably estimated.

The table above also excludes estimated minimum funding requirements for retiree benefit plans as set forth by ERISA in relation to the company's pension and postretirement benefit obligations totaling approximately \$3.5 billion over the next five years: \$185 million in 2012, \$421 million in 2013, \$1.2 billion in 2014, \$1 billion in 2015, and \$702 million in 2016. The company also has payments due under plans that are not required to be funded in advance, but are funded on a pay-as-you-go basis. See Note 16 to the consolidated financial statements in Part II, Item 8.

Further details regarding long-term debt and operating leases can be found in Notes 13 and 15, respectively, to the consolidated financial statements in Part II, Item 8.

**OTHER MATTERS**

**Accounting Standards Updates**

The Financial Accounting Standards Board has issued new accounting standards which are not effective until after December 31, 2011. For further discussion of new accounting standards, see Note 2 to the consolidated financial statements in Part II, Item 8.

**Off-Balance Sheet Arrangements**

As of December 31, 2011, we had no significant off-balance sheet arrangements other than operating leases. For a description of our operating leases, see Note 15 to the consolidated financial statements in Part II, Item 8.

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**NORTHROP GRUMMAN CORPORATION**

**GLOSSARY OF PROGRAMS**

Listed below are brief descriptions of the programs discussed in Segment Operating Results of this Form 10-K.

<b>Program Name</b>	<b>Program Description</b>
Advanced Extremely High Frequency (AEHF)	Provide the communication payload for the nation's next generation military strategic and tactical satellite relay systems that will deliver survivable, protected communications to U.S. forces and selected allies worldwide.
Africa Contingency Operations Training & Assistance (ACOTA)	Provide peacekeeping training to militaries in African nations via the Department of State. The program is designed to improve the ability of African governments to respond quickly to crises by providing selected militaries with the training and equipment required to execute humanitarian or peace support operations.
Armed Forces Health Longitudinal Technology Application (AHLTA)	An enterprise-wide medical and dental clinical information system that provides secure online access to health records.
B-2 Stealth Bomber	Maintain and upgrade the fleet of strategic, long-range multi-role bomber with war-fighting capability that combines long range, large payload, all-aspect stealth, and near-precision weapons in one aircraft.
Battlefield Airborne Communications Node (BACN)	Install the BACN system in three Bombardier BD-700 Global Express aircraft for immediate fielding and install the BACN system into two Global Hawk Block 20 unmanned aerial vehicles.
Broad Area Maritime Surveillance (BAMS) Unmanned Aircraft Systems	A maritime derivative of the Global Hawk that provides persistent maritime ISR data collection and dissemination capability to the Maritime Patrol and Reconnaissance Force.
Cobra Judy	The Cobra Judy Replacement program will replace the current U.S. Naval Ship (USNS) Observation Island and its aged AN/SPQ-11 Cobra Judy ballistic missile tracking radar. Northrop Grumman will provide the S-band phased-array radar for use in technical data collection against ballistic missiles in flight.
C-20	Contractor Logistics Services contract supporting the U.S. Air Force, Army, Navy and Marine Corps C-20 aircraft including depot maintenance, contractor operational and maintained base supply, flight line maintenance and field team support at multiple main operating bases, located in the United States and overseas.
County of San Diego IT Outsourcing	Provide high-level IT consulting and services to San Diego County including data center, help desk, desktop, network, applications and cross-functional services.
Defense Weather Satellite System (DWSS)	Design, develop, integrate, test and operate two satellites with sensors that will provide global and regional weather and environmental data for the DoD.
EA-6B	The EA-6B (Prowler) primary mission is to jam enemy radar and communications, thereby preventing them from directing hostile surface-to-air missiles at assets the Prowler protects. When equipped with the improved ALQ-218 receiver and the next generation ICAP III (Improved Capability) Airborne Electronic Attack (AEA) suite the Prowler is able to provide rapid detection, precise classification, and highly accurate geolocation of electronic emissions and counter modern, frequency-hopping radars.



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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
EA-18G	The armed services' only offensive tactical radar jamming aircraft. The Improved Capability (ICAP) III mission system capability, developed for the EA-6B Prowler, is being incorporated into an F/A-18 platform (designated the EA-18G).
E-2 Hawkeye	Develop the next generation capabilities for the U.S. Navy's airborne battle management command and control mission system platform that provides airborne early warning detection, identification, tracking, targeting, and communication capabilities, including radar, mission computer, vehicle, and other system enhancements, to support the U.S Naval Battle Groups and Joint Forces, called the E-2D Advanced Hawkeye.
Encore II	Provide Military Agencies, the DoD, and other agencies of the Federal Government IT services and associated enabling products to satisfy IT activities at all operating levels, including hardware and software incidental to an overall IT solution.
Enterprise Network Management	Maintain and improve the Department of States' enterprise-wide IT infrastructure.
F-16 Block 60	Direct commercial firm fixed-price program with Lockheed Martin Aeronautics Company to develop and produce 80 Lot systems for aircraft delivery to the United Arab Emirates Air Force as well as test equipment and spares to be used to support in-country repairs of sensors.
F-22	Joint venture with Raytheon to design, develop and produce the F-22 radar system. Northrop Grumman is responsible for the overall design of the AN/APG-77 and AN/APG-77(V) 1 radar systems, including the control and signal processing software and responsibility for the AESA radar systems integration and test activities. In addition, Northrop Grumman is responsible for overall design and integration of the F-22 Communication, Navigation, and Identification (CNI) system.
F-35 Lightning II (F-35)	Design, integration, and development of the center fuselage and weapons bay, communications, navigations, identification subsystem, systems engineering, and mission systems software and sensors, as well as provide ground and flight test support, modeling, simulation activities, and training courseware.
F/A-18	Produce the center and aft fuselage sections, twin vertical stabilizers, and integrate all associated subsystems for the F/A-18 Hornet strike fighters.
Flat Sequencing System (FSS)	Build systems for the U.S. Postal Service designed to further automate the flat mail stream, which includes large envelopes, catalogs and magazines.
Force Protection Security System (FPS2)	Follow-on to the Integrated Base Defense Security System (IBDSS) program to provide the U.S. Air Force and other DoD customers with force protection security solutions, utilizing comprehensive and integrated technology to satisfy a wide array of security concerns both within and outside the continental U.S.

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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
Ground / Air Task Oriented Radar (G/ATOR)	A development program to provide the next generation ground based multi-mission radar for the USMC. Provides Short Range Air Defense, Air Defense Surveillance, Ground Weapon Location and Air Traffic Control. Replaces five existing USMC single-mission radars.
Global Hawk High-Altitude Long-Endurance (HALE) Systems	Develop, deliver and sustain the Global Hawk HALE unmanned aerial system and its derivatives to both domestic and international customers for ISR, including deployment of assets to support the global war on terror.
Global Linguists Solutions	Provide interpretation, translation and linguist services in support of Operation Iraqi Freedom.
Integrated Battle Command System (IBCS)	The Integrated Air & Missile Defense, Battle Command System (IBCS) component concept provides for a common battle management, command, control, communications, computers and intelligence capability with integrated fire control hardware/software product design, integration, and development that supports initial operational capability of the Joint Integrated Air and Missile Defense Increment 2.
Intercontinental Ballistic Missile (ICBM)	Maintain readiness of the nation's ICBM weapon system.
James Webb Space Telescope (JWST)	Design, develop, integrate and test a space-based infrared telescope satellite to observe the formation of the first stars and galaxies in the universe.
Joint National Integration Center Research and Development Contract (JRDC)	Support the development and application of modeling and simulation, war gaming, test and analytic tools for air and missile defense.
Joint Surveillance Target Attack Radar System (Joint STARS)	Detect, locate, classify, track, and target hostile ground movements, while communicating real-time information through secure data links with U.S. Air Force and Army command posts.
Joint Warfighting Center (JWFC)	Provide non-personal general and technical support to the USJFCOM Joint Force Trainer / JWFC to ensure the successful worldwide execution of the Joint Training and Transformation missions.
KC-10 Contractor Logistics Support (KC-10)	Provide support to the U.S. Air Force KC-10 tanker fleet, including depot maintenance, supply chain management, and maintenance and management at locations in the United States and worldwide.
Kinetic Energy Interceptor (KEI)	Develop mobile missile-defense system with the unique capability to destroy a hostile missile during its boost, ascent or midcourse phase of flight. This program was terminated for the U.S. government's convenience in 2009.

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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
Large Aircraft Infrared Countermeasures (LAIRCM)	Provide support and hardware for infrared countermeasures systems for the C-17 and C-130 aircrafts. The IDIQ contract will further allow for the purchase of LAIRCM hardware for foreign military sales and other government agencies.
Long Endurance Multi-Intelligence Vehicle (LEMV)	Northrop was awarded the contract by the U.S. Army Space and Missile Defense Command for the development, fabrication, integration, certification and performance of one LEMV system. It is a state-of-the-art, lighter-than-air airship designed to provide ground troops with persistent surveillance. Development and demonstration of the first airship is scheduled to be completed June 2012. The contract also includes options for 2 additional airships and in-country support.
LITENING Gen 4	Design and develop self-contained multi-sensor targeting and surveillance system that enables aircrews to detect, acquire, auto-track and identify targets at extremely long ranges for weapons delivery and non-traditional ISR missions.
National Security Technologies (NSTec)	Participate in a joint venture that manages and operates the Nevada National Security Site, providing infrastructure support, including oversight of the nuclear explosives safety team, supporting hazardous chemical spill testing, emergency response training and conventional weapons testing.
Navstar Global Positioning System Operational Control Segment (GPS OCX)	Operational control system for existing and future GPS constellation. Includes all satellite C2, mission planning, constellation management, external interfaces, monitoring stations, and ground antennas. Phase A effort includes effort to accomplish a System Requirements Review (SRR), System Design Review (SDR), and development of a Mission Capabilities Engineering Model (MCEM) prototype.
Navy Unmanned Combat Air System (N-UCAS)	Design, develop and demonstrate the first unmanned jet aircraft able to take off and land aboard an aircraft carrier. N-UCAS will demonstrate that a long-range, low-observable, unmanned aircraft can operate safely from aircraft carriers and refuel in-flight to achieve ultra-long endurance for several missions including strike and ISR.
Network Centric Solutions Defense Knowledge Online (Netcents DKO)	Maintain and enhance key user services such as Portal, E-mail, IM, Directory, Search, Go Mobile, SSO, Database, Army Home Page in support of the 2.3 million Army and DoD users.
New York City Wireless (NYCWIn)	Provide New York City's broadband public-safety wireless network.
Postal Automation	Supports sequencing and sorting of flats with the United States Postal Service (USPS) and both letters and flats within the international market. Postal Automation also supports the USPS to ensure the safety of the mail through its Biohazard Detection equipment.
Saudi Arabian American Oil Company (ARAMCO)	Provide an integrated security system at multiple sites with C2 connectivity to various regional C2 centers within Saudi Arabia.

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**NORTHROP GRUMMAN CORPORATION**

<b>Program Name</b>	<b>Program Description</b>
Space-Based Infrared System (SBIRS)	Design and develop space-based surveillance systems for missile warning, missile defense, battlespace characterization and technical intelligence.
Trailer Mounted Support System (TMSS)	Trailer Mounted Support System is a key part of the Army's Standard Integrated Command Post System program providing workspace, power distribution, lighting, environmental conditioning (heating and cooling) tables and a common grounding system for commanders and staff at all echelons.
Treasury Communication System (TCS)	Provide telecommunications infrastructure for collaboration, communication and computing as required by the U.S. Department of Treasury.
Vehicular Intercommunications Systems (VIS)	Provide clear and noise-free communications between crewmembers inside combat vehicles and externally over as many as six combat net radios for the Army. The active noise-reduction features of VIS provide significant improvement in speech intelligibility, hearing protection, and vehicle crew performance.
Virginia Class Submarine (VCS)	Produce power and control systems along with advanced surveillance arrays for all Virginia Class Submarines. The Virginia Class is an advanced stealth multimission nuclear-powered submarine for deep ocean anti-submarine warfare and littoral operations.
Virginia IT Outsource (VITA)	Provide high-level IT consulting, IT infrastructure and services to Virginia state and local agencies including data center, help desk, desktop, network, applications and cross-functional services.

**Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

*Market Risk* – We are exposed to market risk with respect to our portfolio of trading and available-for-sale marketable securities with a fair value of \$223 million at December 31, 2011.

*Interest Rate Risk* – We are exposed to interest rate risk with respect to our holdings of cash and cash equivalents of \$3.0 billion at December 31, 2011, and we are also exposed to interest rate risk on variable-rate short-term credit facilities for which there were no borrowings outstanding at December 31, 2011. At December 31, 2011, we have \$3.9 billion of long-term debt, primarily consisting of fixed rate debt, with a fair value of approximately \$4.7 billion.

*Derivatives* – We do not hold or issue derivative financial instruments for trading purposes. From time to time, we may enter into interest rate swap agreements to manage our exposure to interest rate fluctuations. At December 31, 2011, we have no interest rate swap agreements in effect.

*Foreign Currency Risk* – We are exposed to foreign currency risk with respect to our foreign operations. We enter into foreign currency forward contracts to manage a portion of the exchange rate risk related to receipts from customers and payments to suppliers denominated in foreign currencies. At December 31, 2011, foreign currency forward contracts with a notional amount of \$233 million were outstanding.

*Inflation Risk* – We have generally been able to anticipate increases in costs when pricing our contracts. Bids for longer-term firm fixed-price contracts typically include labor and other cost escalations in amounts that historically have been sufficient to cover cost increases over the period of performance.

A 10 percent change in interest rates or foreign currency exchange rates would not have a material impact to our consolidated financial position or results of operations.

**NORTHROP GRUMMAN CORPORATION**

**Item 8. Financial Statements and Supplementary Data**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Shareholders of  
Northrop Grumman Corporation  
Falls Church, Virginia

We have audited the accompanying consolidated statements of financial position of Northrop Grumman Corporation and subsidiaries (the "Company") as of December 31, 2011 and 2010, and the related consolidated statements of operations, changes in shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2011. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Northrop Grumman Corporation and subsidiaries at December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2011, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2011, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 7, 2012 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ Deloitte & Touche LLP  
McLean, Virginia  
February 7, 2012

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## NORTHROP GRUMMAN CORPORATION

## CONSOLIDATED STATEMENTS OF OPERATIONS

<i>\$ in millions, except per share amounts</i>	Year Ended December 31		
	2011	2010	2009
Sales and Service Revenues			
Product sales	\$15,073	\$ 16,091	\$ 16,004
Service revenues	11,339	12,052	11,646
Total sales and service revenues	26,412	28,143	27,650
Cost of Sales and Service Revenues			
Cost of product sales	11,491	12,558	12,648
Cost of service revenues	9,295	10,291	10,157
General and administrative expenses	2,350	2,467	2,571
Operating income	3,276	2,827	2,274
Other (expense) income			
Interest expense	(221)	(269)	(269)
Charge on debt redemption		(229)	
Other, net	28	37	65
Earnings from continuing operations before income taxes	3,083	2,366	2,070
Federal and foreign income tax expense	997	462	636
Earnings from continuing operations	2,086	1,904	1,434
Earnings from discontinued operations, net of tax	32	149	252
Net earnings	\$ 2,118	\$ 2,053	\$ 1,686
Basic Earnings Per Share			
Continuing operations	\$ 7.54	\$ 6.41	\$ 4.49
Discontinued operations	.11	.50	.79
Basic earnings per share	\$ 7.65	\$ 6.91	\$ 5.28
Weighted-average common shares outstanding, in millions	276.8	296.9	319.2
Diluted Earnings Per Share			
Continuing operations	\$ 7.41	\$ 6.32	\$ 4.44
Discontinued operations	.11	.50	.77
Diluted earnings per share	\$ 7.52	\$ 6.82	\$ 5.21
Weighted-average diluted shares outstanding, in millions	281.6	301.1	323.3
Net earnings (from above)	\$ 2,118	\$ 2,053	\$ 1,686
Other comprehensive (loss) income			
Change in cumulative translation adjustment	(4)	(41)	31
Change in unrealized (loss) gain on marketable securities and cash flow hedges, net of tax benefit (expense) of \$2 in 2011, \$0 in 2010, and \$(23) in 2009	(4)	1	36
Change in unamortized benefit plan costs, net of tax benefit (expense) of \$823 in 2011, \$(183) in 2010, and \$(374) in 2009	(1,249)	297	561
Other comprehensive (loss) income, net of tax	(1,257)	257	628
Comprehensive income	\$ 861	\$ 2,310	\$ 2,314

The accompanying notes are an integral part of these consolidated financial statements.

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**CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**

<i>\$ in millions</i>	December 31	
	2011	2010
<b>Assets</b>		
<b>Current Assets</b>		
Cash and cash equivalents	\$ 3,002	\$ 3,701
Accounts receivable, net of progress payments	2,964	3,329
Inventoried costs, net of progress payments	873	896
Deferred tax assets	496	392
Prepaid expenses and other current assets	411	244
Assets of discontinued operations		5,212
<b>Total current assets</b>	<b>7,746</b>	<b>13,774</b>
<b>Property, Plant, and Equipment</b>		
Land and land improvements	375	363
Buildings and improvements	1,433	1,363
Machinery and other equipment	4,143	3,972
Capitalized software costs	444	451
Leasehold improvements	585	608
Property, plant, and equipment, cost	6,980	6,757
Accumulated depreciation	(3,933)	(3,712)
Property, plant, and equipment, net	3,047	3,045
<b>Other Assets</b>		
Goodwill	12,374	12,376
Other purchased intangibles, net of accumulated amortization of \$1,650 in 2011 and \$1,613 in 2010	155	192
Pension and post-retirement plan assets	153	320
Long-term deferred tax assets	900	628
Miscellaneous other assets	1,036	1,075
<b>Total other assets</b>	<b>14,618</b>	<b>14,591</b>
<b>Total assets</b>	<b>\$ 25,411</b>	<b>\$ 31,410</b>
<b>Liabilities and Shareholders' Equity</b>		
<b>Current Liabilities</b>		
Notes payables to banks and current portion of long-term debt	\$ 13	\$ 784
Trade accounts payable	1,481	1,573
Accrued employees' compensation	1,196	1,146
Advance payments and billings in excess of costs incurred	1,777	1,969
Other current liabilities	1,668	1,763
Liabilities of discontinued operations		2,792
<b>Total current liabilities</b>	<b>6,135</b>	<b>10,027</b>
Long-term debt, net of current portion	3,935	3,940
Pension and post-retirement plan liabilities	4,079	3,089
Other long-term liabilities	926	918
<b>Total liabilities</b>	<b>15,075</b>	<b>17,974</b>
Commitments and Contingencies (Note 15)		
<b>Shareholders' Equity</b>		
Preferred Stock, \$1 par value; 10,000,000 shares authorized; no shares issued and outstanding in 2011 and 2010		
Common stock, \$1 par value; 800,000,000 shares authorized; issued and outstanding: 2011 — 253,889,622; 2010 — 290,956,752	254	291
Paid-in capital	3,873	7,778
Retained earnings	9,699	8,124
Accumulated other comprehensive loss	(3,490)	(2,757)
<b>Total shareholders' equity</b>	<b>10,336</b>	<b>13,436</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 25,411</b>	<b>\$ 31,410</b>

The accompanying notes are an integral part of these consolidated financial statements.

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## NORTHROP GRUMMAN CORPORATION

## CONSOLIDATED STATEMENTS OF CASH FLOWS

\$ in millions	Year Ended December 31		
	2011	2010	2009
<b>Operating Activities</b>			
Sources of Cash — Continuing Operations			
Cash received from customers			
Progress payments	\$ 4,803	\$ 4,437	\$ 2,957
Collections on billings	21,628	23,531	24,955
Other cash receipts	149	40	71
Total sources of cash — continuing operations	26,580	28,008	27,983
Uses of Cash — Continuing Operations			
Cash paid to suppliers and employees			
	(22,059)	(23,759)	(23,761)
Pension contributions	(1,084)	(789)	(657)
Interest paid, net of interest received	(227)	(269)	(257)
Income taxes paid, net of refunds received	(810)	(1,071)	(774)
Income taxes paid on sale of business			(508)
Excess tax benefits from stock-based compensation	(17)	(22)	(2)
Other cash payments	(36)	(42)	(29)
Total uses of cash — continuing operations	(24,233)	(25,952)	(25,988)
Cash provided by continuing operations	2,347	2,056	1,995
Cash (used in) provided by discontinued operations	(232)	397	138
Net cash provided by operating activities	2,115	2,453	2,133
<b>Investing Activities</b>			
Continuing Operations			
Contribution received from the spin-off of Shipbuilding business			
	1,429		
Additions to property, plant, and equipment	(488)	(579)	(473)
Purchases of short term investments	(450)	(2)	
Maturities of short term investments	200		
Proceeds from sale of business, net of cash divested	4	14	1,650
Other investing activities, net	48	(4)	(127)
Cash provided by (used in) investing activities by continuing operations	743	(571)	1,050
Cash used in investing activities by discontinued operations	(63)	(189)	(184)
Net cash provided by (used in) investing activities	680	(760)	866
<b>Financing Activities</b>			
Common stock repurchases			
	(2,295)	(1,177)	(1,100)
Payments of long-term debt	(768)	(1,011)	(474)
Proceeds from issuance of long-term debt		1,484	843
Cash dividends paid	(543)	(545)	(539)
Proceeds from exercises of stock options and common stock issuances	101	142	51
Excess tax benefits from stock-based compensation	17	22	2
Other financing activities, net	(6)	(2)	(12)
Cash used in financing activities by continuing operations	(3,494)	(1,087)	(1,229)
Cash used in financing activities by discontinued operations		(179)	
Net cash used in financing activities	(3,494)	(1,266)	(1,229)
(Decrease) increase in cash and cash equivalents	(699)	427	1,770
Cash and cash equivalents, beginning of year	3,701	3,274	1,504
Cash and cash equivalents, end of year	\$ 3,002	\$ 3,701	\$ 3,274

The accompanying notes are an integral part of these consolidated financial statements.



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## NORTHROP GRUMMAN CORPORATION

## CONSOLIDATED STATEMENTS OF CASH FLOWS

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
<b>Reconciliation of Net Earnings to Net Cash Provided by Operating Activities</b>			
Net earnings	\$2,118	\$ 2,053	\$ 1,686
Net earnings from discontinued operations	(32)	(134)	(234)
Adjustments to reconcile to net cash provided by operating activities			
Depreciation	462	446	429
Amortization of assets	82	109	121
Stock-based compensation	140	136	105
Excess tax benefits from stock-based compensation	(17)	(22)	(2)
Pre-tax gain on sale of businesses		(10)	(446)
Charge on debt redemption		229	
(Increase) decrease in			
Accounts receivable, net	350	(471)	345
Inventoried costs, net	(2)	(64)	(133)
Prepaid expenses and other current assets	16	36	(4)
Increase (decrease) in			
Accounts payable and accruals	(341)	70	(133)
Deferred income taxes	441	89	204
Income taxes payable	(32)	(26)	65
Retiree benefits	(904)	(354)	60
Other, net	66	(31)	(68)
Cash provided by continuing operations	2,347	2,056	1,995
Cash (used in) provided by discontinued operations	(232)	397	138
Net cash provided by operating activities	\$2,115	\$ 2,453	\$ 2,133
<b>Non-cash Investing and Financing Activities</b>			
Sale of businesses			
Liabilities assumed by the purchaser			\$ 167

The accompanying notes are an integral part of these consolidated financial statements.

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## NORTHROP GRUMMAN CORPORATION

## CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

<i>\$ in millions, except per share amounts</i>	Year Ended December 31		
	2011	2010	2009
<b>Common Stock</b>			
At beginning of year	\$ 291	\$ 307	\$ 327
Common stock repurchased	(40)	(20)	(23)
Employee stock awards and options	3	4	3
At end of year	254	291	307
<b>Paid-in Capital</b>			
At beginning of year	7,778	8,657	9,645
Common stock repurchased	(2,264)	(1,143)	(1,098)
Employee stock awards and options exercised	236	264	110
Spin-off of Shipbuilding business	(1,877)		
At end of year	3,873	7,778	8,657
<b>Retained Earnings</b>			
At beginning of year (Note 10)	8,124	6,616	5,469
Net earnings	2,118	2,053	1,686
Cash dividends declared	(543)	(545)	(539)
At end of year	9,699	8,124	6,616
<b>Accumulated Other Comprehensive Loss</b>			
At beginning of year	(2,757)	(3,014)	(3,642)
Other comprehensive (loss) income, net of tax	(1,257)	257	628
Spin-off of Shipbuilding business	524		
At end of year	(3,490)	(2,757)	(3,014)
Total shareholders' equity	\$10,336	\$13,436	\$12,566
Cash dividends declared per share	\$ 1.97	\$ 1.84	\$ 1.69

The accompanying notes are an integral part of these consolidated financial statements.

**NORTHROP GRUMMAN CORPORATION**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*Nature of Operations* – Northrop Grumman Corporation (herein referred to as “Northrop Grumman,” the “company,” “we,” “us,” or “our”) provides technologically advanced, innovative products, services, and integrated solutions in aerospace, electronics, information systems, and technical services. In March 2011, the company completed the spin-off of the Shipbuilding segment. The remaining four segments are Aerospace Systems, Electronic Systems, Information Systems, and Technical Services. Product sales are predominantly generated in the Aerospace Systems and Electronic Systems segments, while the majority of the company’s service revenues are generated by the Information Systems and Technical Services segments.

The company participates in many high-priority defense and government services technology programs in the United States (U.S.) and abroad as a prime contractor, principal subcontractor, partner, or preferred supplier. We conduct most of our business with the U.S. Government, principally the Department of Defense (DoD) and the intelligence community. We also conduct business with local, state, and foreign governments and domestic and international commercial customers.

*Aerospace Systems* is a leading designer, developer, integrator, and producer of manned and unmanned aircraft, spacecraft, high-energy laser systems, microelectronics and other systems and subsystems critical to maintaining the nation’s security and leadership in technology. Aerospace Systems’ customers, primarily government agencies, use these systems in many different mission areas including intelligence, surveillance and reconnaissance; communications; battle management; strike operations; electronic warfare; missile defense; earth observation; space science; and space exploration.

*Electronic Systems* is a leader in the design, development, manufacture, and support of solutions for sensing, understanding, anticipating, and controlling the environment for our global military, civil, and commercial customers and their operations. The segment provides a variety of defense electronics and systems, airborne fire control radars, situational awareness systems, early warning systems, airspace management systems, navigation systems, communications systems, marine systems, space systems, and logistics services.

*Information Systems* is a leading provider of advanced solutions for DoD, national intelligence, federal civilian, state and local agencies, and commercial customers. Products and services are focused on the fields of command, control, communications, computers and intelligence; air and missile defense; airborne reconnaissance; intelligence processing; decision support systems; cybersecurity; information technology; and systems engineering and integration.

*Technical Services* is a provider of logistics, infrastructure, and sustainment support, providing an array of modernization, high technology, and training and simulation services.

*Principles of Consolidation* – The consolidated financial statements include the accounts of Northrop Grumman and its subsidiaries. All material intercompany accounts, transactions, and profits are eliminated in consolidation. Investments in equity securities and joint ventures where the Company has significant influence, but not control, are accounted for using the equity method.

*Accounting Estimates* – The company’s financial statements are prepared in conformity with accounting principles generally accepted in the United States of America (GAAP). The preparation thereof requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements as well as the reported amounts of revenues and expenses during the reporting period. Estimates have been prepared on the basis of the most current and best available information and actual results could differ materially from those estimates.

## NORTHROP GRUMMAN CORPORATION

*Revenue Recognition* – The majority of the company’s business is derived from long-term contracts for production of goods, and services provided to the federal government. In accounting for these contracts, the company extensively utilizes the cost-to-cost and the units-of-delivery measures of the percentage-of-completion method of accounting. Sales under cost-reimbursement contracts and construction-type contracts that provide for delivery at a low volume per year or a small number of units after a lengthy period of time over which a significant amount of costs have been incurred are accounted for using the cost-to-cost method. Under this method, sales, including estimated earned fees or profits, are recorded as costs are incurred. Sales under contracts that provide for delivery at a high volume per year are accounted for using the units-of-delivery method. Under this method, sales are recognized as deliveries are made to the customer generally using unit sales values for delivered units in accordance with the contract terms. The company estimates profit on units-of-delivery contracts as the difference between total estimated revenue and total estimated cost of a contract and recognizes that profit over the life of the contract based on deliveries or as computed on the basis of the estimated final average unit costs plus profit. The company classifies contract revenues as product sales or service revenues depending upon the predominant attributes of the relevant underlying contracts.

Certain contracts contain provisions for price redetermination or for cost and/or performance incentives. Such redetermined amounts or incentives are included in sales when the amounts can reasonably be determined and estimated. Amounts representing contract change orders, claims, requests for equitable adjustment, or limitations in funding are included in sales only when they can be reliably estimated and realization is probable. In the period in which it is determined that a loss will result from the performance of a contract, the entire amount of the estimated ultimate loss is charged against income. Loss provisions are first offset against costs that are included in unbilled accounts receivable or inventoried costs, with any remaining amount reflected in liabilities. Changes in estimates of contract sales, costs, or profits are recognized using the cumulative catch-up method of accounting. This method recognizes in the current period the cumulative effect of the changes on current or prior periods. Hence, the effect of the changes on future periods of contract performance is recognized as if the revised estimate had been used since contract inception.

Changes in contract estimates occur for a variety of reasons including changes in contract scope, unforeseen changes in contract cost estimates due to unanticipated cost growth or risks affecting contract costs and/or the resolution of contract risks at lower costs than anticipated, as well as changes in contract overhead costs over the performance period. The company has an extensive contract management process involving several functional organizations and numerous personnel who are skilled at managing contract activities. Because the company’s business involves performing on a broad portfolio of long-term contracts, generally involving complex customized products and services principally for its U.S. Government customers, changes in estimates occur routinely over the contract performance period. Significant changes in estimates on a single contract could have a material effect on the company’s consolidated financial position or annual results of operations, and where such changes occur, separate disclosure is made of the nature, underlying conditions and financial impact of the change. Aggregate net changes in contract estimates recognized using the cumulative catch-up method of accounting increased operating income by \$738 million (\$1.70 per diluted share) in 2011, \$675 million (\$1.46 per diluted share) in 2010, and \$421 million (\$0.85 per diluted share) in 2009. No discrete event or adjustments to an individual contract within the aggregate net changes in contract estimates for 2011, 2010 or 2009 was material to the consolidated statement of operations for such annual period.

Revenue under contracts to provide services to non-federal government customers are generally recognized when services are performed. Service contracts include operations and maintenance contracts, and outsourcing-type arrangements, primarily in the Information Systems and Technical Services segments. Revenue under such contracts is generally recognized on a straight-line basis over the period of contract performance, unless evidence suggests that the revenue is earned or the obligations are fulfilled in a different pattern. Costs incurred under these service contracts are expensed as incurred, except that direct and incremental set-up costs are capitalized and amortized over the life of the agreement (see *Outsourcing Contract Costs* below). Operating profit related to such service contracts may fluctuate from period to period, particularly in the earlier phases of the contract. For contracts that include more than one type of product or service, revenue recognition includes the proper identification of separate units of accounting and the allocation of revenue across all elements based on relative fair values.

## NORTHROP GRUMMAN CORPORATION

*General and Administrative Expenses* – In accordance with industry practice and the regulations that govern the cost accounting requirements for government contracts, most general corporate expenses incurred at both the segment and corporate locations are considered allowable and allocable costs on government contracts. For most components of the company, these costs are allocated to contracts in progress on a systematic basis and contract performance factors include this cost component as an element of cost.

*Research and Development* – Company-sponsored research and development activities primarily include independent research and development (IR&D) efforts related to government programs. IR&D expenses are included in general and administrative expenses in the consolidated statement of operations and are generally allocated to government contracts. Company-sponsored IR&D expenses totaled \$543 million, \$580 million, and \$588 million, in 2011, 2010, and 2009, respectively. Expenses for research and development sponsored by the customer are charged directly to the related contracts.

*Product Warranty Costs* – The company provides certain product warranties that require repair or replacement of non-conforming items for a specified period of time often subject to a specified monetary coverage limit. Substantially all of the company's product warranties are provided under government contracts, the costs of which are immaterial and are accounted for using the percentage-of-completion method of accounting. Accrued product warranty costs for the remainder of our products (which are almost entirely commercial products) are not material.

*Environmental Costs* – Environmental liabilities are accrued when the company determines that, based on the facts and circumstances known to the company, such amounts are reasonably estimable and it is probable that a liability will be found to have been incurred. When only a range of amounts is established and no amount within the range is more probable than another, the minimum amount in the range is recorded. Environmental liabilities are recorded on an undiscounted basis. At sites involving multiple parties, the company accrues environmental liabilities based upon its expected share of liability, taking into account the financial viability of other jointly liable parties. A portion of the environmental remediation costs is expected to be recoverable through overhead charges on government contracts and, accordingly, such amounts are deferred in inventoried costs (current portion) and miscellaneous other assets (non-current portion). Environmental expenditures are expensed or capitalized as appropriate. Capitalized expenditures relate to long-lived improvements in currently operating facilities. The company does not record insurance recoveries before collection is probable. At December 31, 2011 and 2010, the company did not have any accrued receivables related to insurance reimbursements.

*Fair Value of Financial Instruments* – The company utilizes fair value measurement guidance prescribed by GAAP to value its financial instruments. The guidance includes a definition of fair value, prescribes methods for measuring fair value, establishes a fair value hierarchy based on the inputs used to measure fair value and expands disclosures about the use of fair value measurements.

The valuation techniques utilized are based upon observable and unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect internal market assumptions.

These two types of inputs create the following fair value hierarchy:

- Level 1 – Quoted prices for identical instruments in active markets.
- Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations whose inputs are observable or whose significant value drivers are observable.
- Level 3 – Significant inputs to the valuation model are unobservable.

*Derivative Financial Instruments* – Derivative financial instruments are recognized as assets or liabilities in the financial statements and measured at fair value. Changes in the fair value of derivative financial instruments that qualify and are designated as fair value hedges are recorded in income from continuing operations, while the effective portion of the changes in the fair value of derivative financial instruments that qualify and are designated as cash flow hedges are recorded in other comprehensive income. The company may use derivative financial

## NORTHROP GRUMMAN CORPORATION

instruments to manage its exposure to interest rate and foreign currency exchange risks and to balance its fixed and variable rate long-term debt portfolio. The company does not use derivative financial instruments for trading or speculative purposes, nor does it use leveraged financial instruments. Credit risk related to derivative financial instruments is considered minimal and is managed by requiring high credit standards for counterparties and through periodic settlements of positions.

For derivative financial instruments not designated as cash flow hedging instruments, gains or losses resulting from changes in the fair value are reported in Other, net in the consolidated statements of operations.

*Income Taxes* – Provisions for federal, foreign, state, and local income taxes are calculated on reported financial statement pre-tax income based on current tax law and include the cumulative effect of any changes in tax rates from those used previously in determining deferred tax assets and liabilities. Such provisions differ from the amounts currently payable because certain items of income and expense are recognized in different time periods for financial reporting purposes than for income tax purposes. If a tax position does not meet the minimum statutory threshold to avoid payment of penalties, the company recognizes an expense for the amount of the penalty in the period the tax position is determined. The company recognizes federal interest accrued related to unrecognized tax benefits in income tax expense. The company recognizes state interest accrued related to unrecognized tax benefits in operating income. Federal penalties are recognized as a component of income tax expense. State and local income and franchise tax provisions are allocable to government contracts in process and, accordingly, are included in operating income.

The company performs a comprehensive review of its portfolio of uncertain tax positions regularly. In this regard, an uncertain tax position represents the company's expected treatment of a tax position taken in a filed tax return, or planned to be taken in a future tax return or claim, that has not been reflected in measuring income tax expense for financial reporting purposes. Until these positions are sustained by the taxing authorities or the statute of limitations concerning such issues lapses, the company does not recognize the tax benefits resulting from such positions and reports the tax effects as a liability for uncertain tax positions in its consolidated statements of financial position.

*Cash and cash equivalents* – Cash and cash equivalents are comprised of cash in banks and highly liquid instruments with original maturities of three months or less, primarily consisting of bank time deposits and investments in institutional money market funds. The carrying amounts approximate fair value due to the short-term nature of these items. The company does not invest in high yield or high risk securities. Cash in bank accounts at times may exceed federally insured limits.

*Marketable Securities* – Marketable securities accounted as trading and available-for-sale are recorded at fair value. For available-for-sale securities, any unrealized gains and losses are reported as a separate component of Accumulated Other Comprehensive Income (AOCI). Unrealized gains and losses on trading securities are included in Other, net in the consolidated statements of operations. In addition, investments in held-to-maturity instruments with original maturities greater than three months are recorded at amortized cost, and are included in prepaid expenses and other current assets in the consolidated statements of financial position.

*Accounts Receivable* – Accounts receivable include amounts billed and currently due from customers, amounts currently due but unbilled (primarily related to contracts accounted for under the cost-to-cost measure of the percentage-of-completion method of accounting), certain estimated contract change amounts, claims or requests for equitable adjustment in negotiation that are probable of recovery, and amounts retained by the customer pending contract completion.

*Inventoried Costs* – Inventoried costs primarily relate to work in process under fixed-price and units-of-delivery contracts. These costs represent accumulated contract costs less the portion of such costs allocated to delivered items. Accumulated contract costs include direct production costs, factory and engineering overhead, production tooling costs, and, for government contracts, allowable general and administrative expenses. According to the provisions of U.S. Government contracts, the customer asserts title to, or a security interest in, inventories related to such contracts as a result of contract advances, performance-based payments, and progress payments. In

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accordance with industry practice, inventoried costs are classified as a current asset and include amounts related to contracts having production cycles longer than one year. Product inventory primarily consists of raw materials and is stated at the lower of cost or market, generally using the average cost method. General corporate expenses and IR&D allocable to commercial contracts are expensed as incurred.

*Outsourcing Contract Costs* – Costs on outsourcing contracts, including costs incurred for bid and proposal activities, are generally expensed as incurred. However, certain costs incurred upon initiation of an outsourcing contract are deferred and expensed over the contract life. These costs represent incremental external costs or certain specific internal costs that are directly related to the contract acquisition and transition/set-up. The primary types of costs that may be capitalized include labor and related fringe benefits, subcontractor costs, and travel costs. The company capitalized \$4 million, \$4 million, and \$57 million and amortized \$45 million, \$39 million, and \$46 million of such costs in 2011, 2010 and 2009, respectively. At December 31, 2011 and 2010, deferred outsourcing contract costs of \$198 million and \$239 million, respectively, are included in miscellaneous other assets in the consolidated statements of financial position.

*Depreciable Properties* – Property, plant, and equipment owned by the company are depreciated over the estimated useful lives of individual assets. Most of these assets are depreciated using declining-balance methods, with the remainder using the straight-line method, with the following lives:

	Years
Land improvements	2-40
Buildings and improvements	2-45
Machinery and other equipment	2-20
Capitalized software costs	3-5
Leasehold improvements	Length of Lease

*Leases* – The company uses its incremental borrowing rate in the assessment of lease classification as capital or operating and defines the initial lease term to include renewal options determined to be reasonably assured. The company conducts operations primarily under operating leases.

Many of the company's real property lease agreements contain incentives for tenant improvements, rent holidays, or rent escalation clauses. For tenant improvement incentives, the company records a deferred rent liability and amortizes the deferred rent over the term of the lease as a reduction to rent expense. For rent holidays and rent escalation clauses during the lease term, the company records minimum rental expenses on a straight-line basis over the term of the lease. For purposes of recognizing lease incentives, the company uses the date of initial possession as the commencement date, which is generally when the company is given the right of access to the space and begins to make improvements in preparation of intended use.

*Goodwill and Other Purchased Intangible Assets* – The company performs impairment tests for goodwill as of November 30th of each year or when the company believes a potential impairment exists. When it is determined that impairment has occurred, a charge to operations is recorded. Goodwill and other purchased intangible asset balances are included in the identifiable assets of the business segment to which they have been assigned. Purchased intangible assets are generally amortized on a straight-line basis over their estimated useful lives (see Note 11).

*Litigation, Commitments, and Contingencies* – Amounts associated with litigation, commitments, and contingencies are recorded as charges to earnings when management, after taking into consideration the facts and circumstances of each matter as then known to them, including any settlement offers, has determined that it is probable that a liability will be found to have been incurred and the amount of the loss can be reasonably estimated. When only a range of amounts is established and no amount within the range is more probable than another, the lower end of the range is recorded. Legal fees are expensed as incurred.

*Retirement Benefits* – The company sponsors various pension plans covering substantially all employees. The company also provides post-retirement benefit plans other than pensions, consisting principally of health care and

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life insurance benefits, to eligible retirees and qualifying dependents. The liabilities, unamortized benefit plan costs and annual income or expense of the company's pension and other post-retirement benefit plans are determined using methodologies that involve several actuarial assumptions, the most significant of which are the discount rate, the long-term rate of asset return (based on the market-related value of assets), and the medical cost experience trend rate (rate of growth for medical costs). Unamortized benefit plan costs consist primarily of accumulated net after-tax actuarial losses. Net actuarial gains or losses are re-determined annually and principally arise from gains or losses on plan assets due to variations in the fair market value of the underlying assets and changes in the benefit obligation due to changes in actuarial assumptions. Net actuarial gains or losses are amortized to expense in future periods when they exceed ten percent of the greater of the plan assets or projected benefit obligations by benefit plan. The excess of gains or losses over the ten percent threshold are subject to amortization over the average future service period of employees of approximately ten years. The fair values of plan assets are determined based on prevailing market prices or estimated fair value for investments with no available quoted prices. Not all net periodic pension income or expense is recognized in net earnings in the year incurred because it is allocated to production as product costs, and a portion remains in inventory at the end of a reporting period. The company's funding policy for pension plans is to contribute, at a minimum, the statutorily required amount to an irrevocable trust.

*Stock Compensation* – All of the company's stock compensation plans are considered equity plans, and compensation expense recognized is net of estimated forfeitures over the vesting period. The company issues stock options and stock awards, in the form of restricted performance stock rights and restricted stock rights, under its existing plans. The fair value of stock option grants are estimated on the date of grant using a Black-Scholes option-pricing model and expensed on a straight-line basis over the vesting period of the options, which is generally three to four years. The fair value of stock awards is determined based on the closing market price of the company's common stock on the grant date and at each reporting date, the number of shares is adjusted to equal the number ultimately expected to vest. Compensation expense for stock awards is expensed over the vesting period, usually three to five years.

*Foreign Currency Translation* – For operations outside the U.S. that prepare financial statements in currencies other than the U.S. dollar, results of operations and cash flows are translated at average exchange rates during the period, and assets and liabilities are generally translated at end-of-period exchange rates. Translation adjustments are generally included as a separate component of accumulated other comprehensive loss in the consolidated statements of shareholders' equity.

*Accumulated Other Comprehensive Loss* – The components of accumulated other comprehensive loss are as follows:

<i>\$ in millions</i>	December 31	
	2011	2010
Cumulative translation adjustment	\$ (4)	\$ —
Net unrealized gain on marketable securities and cash flow hedges, net of tax expense of \$0 as of December 31, 2011, and \$3 as of December 31, 2010	1	5
Unamortized benefit plan costs, net of tax benefit of \$2,289 as of December 31, 2011, and \$1,801 as of December 31, 2010	(3,487)	(2,762)
Total accumulated other comprehensive loss	\$ (3,490)	\$ (2,757)

The changes in unamortized benefit plan costs, net of tax, resulted in other comprehensive loss of \$1.2 billion for the year ended December 31, 2011, and other comprehensive income of \$297 million for the year ended December 31, 2010, in the consolidated statements of operations. In addition, as a result of the spin-off of Shipbuilding (Note 6), the company reduced accumulated other comprehensive loss by \$524 million, as of March 31, 2011, for the after-tax unamortized benefit plan costs related to Shipbuilding.

Unamortized benefit plan costs consist primarily of net after-tax actuarial loss amounts totaling \$3.9 billion and \$2.8 billion as of December 31, 2011 and 2010, respectively. Net actuarial gains or losses principally arise from



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gains or losses on plan assets due to variations in the fair market value of the underlying assets and changes in the benefit obligation due to changes in actuarial assumptions. Net actuarial gains or losses are amortized to expense when they exceed ten percent of the greater of the plan assets or projected benefit obligations by benefit plan. The excess of gains or losses over the ten percent threshold are subject to amortization over ten years, which represents the approximate average future service period of employees.

**2. ACCOUNTING STANDARDS UPDATES**

Accounting standards updates effective after December 31, 2011, are not expected to have a material effect on the company's consolidated financial position or results of operations.

**3. DIVIDENDS ON COMMON STOCK**

*Dividends on Common Stock* – In April 2011, the company's board of directors approved an increase to the quarterly common stock dividend from \$0.47 per share to \$0.50 per share, for shareholders of record as of May 31, 2011.

In May 2010, the company's board of directors approved an increase to the quarterly common stock dividend, from \$0.43 per share to \$0.47 per share, for stockholders of record as of June 1, 2010.

In May 2009, the company's board of directors approved an increase to the quarterly common stock dividend, from \$0.40 per share to \$0.43 per share, for stockholders of record as of June 1, 2009.

**4. EARNINGS PER SHARE**

*Basic Earnings Per Share* – Basic earnings per share amounts from both continuing and discontinued operations are calculated by dividing the respective earnings by the weighted-average number of shares of common stock outstanding during each period.

*Diluted Earnings Per Share* – Diluted earnings per share amounts include the dilutive effect of stock options and other stock awards granted to employees under stock-based compensation plans. The dilutive effect of these securities totaled 4.8 million, 4.2 million, and 4.1 million shares for the years ended December 31, 2011, 2010 and 2009, respectively. The weighted-average diluted shares outstanding for the years ended December 31, 2011, 2010, and 2009, exclude anti-dilutive stock options to purchase approximately 2.8 million, 2.8 million, and 8.1 million shares, respectively, because such options have exercise prices in excess of the average market price of the company's common stock during the year.

*Share Repurchases* – The table below summarizes the company's share repurchases beginning January 1, 2009:

Repurchase Program Authorization Date	Amount Authorized (in millions)	Average Price Per Share <sup>(2)</sup>	Total Shares Retired (in millions)	Date Completed	Shares Repurchased (in millions)		
					2011	2010	2009
December 19, 2007	\$ 3,600	\$ 59.82	60.2	August 2010		15.7	23.1
June 16, 2010 <sup>(1)</sup>	4,245	57.42	44.2		40.2	4.0	
					40.2	19.7	23.1

(1) On June 16, 2010, the company's board of directors authorized a share repurchase program of up to \$2 billion of the company's common stock. On April 25, 2011, after the company had repurchased shares totaling \$245 million, the company's board of directors authorized an increase to the remaining share repurchase authorization to \$4.0 billion. As of December 31, 2011, the company had \$1.7 billion remaining under this authorization for share repurchases.

(2) Includes commissions paid and calculated as the average price per share under the respective repurchase program.

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Under the June 16, 2010 authorization, the company entered into an accelerated share repurchase agreement with Goldman, Sachs & Co. (Goldman Sachs) on May 2, 2011, to repurchase 15.6 million shares of common stock at an initial price of \$64.17 per share for a total of \$1.0 billion. Under this agreement, Goldman Sachs immediately borrowed shares that were sold to and canceled by the company. Subsequently, Goldman Sachs began purchasing shares in the open market to settle its share borrowings. The cost of the company's initial share repurchase was subject to adjustment based on the actual cost of the shares subsequently purchased by Goldman Sachs. On August 16, 2011, Goldman Sachs completed its share repurchases and paid the company a cash refund of \$19 million for the final price adjustment, which was recorded as an adjustment to paid-in capital. The final average purchase price of the shares repurchased under the agreement was \$62.54 per share, including commissions and certain other fees.

Additional share repurchases take place at management's discretion or under pre-established, non-discretionary programs, depending on market conditions, in the open market, and in privately negotiated transactions. Under these programs, additional share repurchases took place during the year ended December 31, 2011. The company retires its common stock upon repurchase and has not made any purchases of common stock other than in connection with these publicly announced repurchase program authorizations. In connection with the spin-off of the Shipbuilding business, the company obtained a Private Letter Ruling ("PLR") from the Internal Revenue Service that generally limits our share repurchases to approximately 88 million shares within two years of the spin-off (a maximum of 30 percent of outstanding shares at the time of the separation). Due to share repurchases subsequent to the spin-off, the remaining number of shares that we can repurchase under this share repurchase limitation as of December 31, 2011, was approximately 48 million shares. Cash available from unusual transactions, such as the disposition of significant assets, should they arise, can be used to repurchase additional shares.

### **5. BUSINESS ACQUISITIONS**

*2009* – In April 2009, the company acquired Sonoma Photonics, Inc., as well as assets from Swift Engineering's Killer Bee Unmanned Air Systems product line for an aggregate amount of approximately \$33 million in cash. The operating results of these businesses are reported in the Aerospace Systems segment from the date of acquisition. The assets, liabilities, and results of operations of these businesses were not material to the company's consolidated financial position or results of operations, and thus pro-forma financial information is not presented.

### **6. BUSINESS DISPOSITIONS**

*2011* – The company completed the spin-off to its shareholders of Huntington Ingalls Industries, Inc. (HII) effective March 31, 2011. HII was formed to operate the business that was previously the company's Shipbuilding segment prior to the spin-off. The company made a pro rata distribution to its shareholders of one share of HII common stock for every six shares of the company's common stock held on the record date of March 30, 2011, or 48.8 million shares of HII common stock. There was no gain or loss recognized by the company as a result of the spin-off transaction. In connection with the spin-off, HII issued \$1,200 million in senior notes and entered into a credit facility with third-party lenders that includes a \$650 million revolver and a \$575 million term loan. HII used a portion of the proceeds of the debt and credit facility to fund a \$1,429 million cash contribution to the company.

Prior to the completion of the spin-off, the company and HII entered into a Separation and Distribution Agreement dated March 29, 2011 and several other agreements that govern the post-separation relationship. These agreements generally provide that each party is responsible for its respective assets, liabilities and obligations following the spin-off, including employee benefits, intellectual property, information technology, insurance and tax-related assets and liabilities. The agreements also describe the company's commitments to provide HII with certain transition services for up to one year and the costs incurred for such services that are reimbursed by HII.

In connection with the spin-off, the company incurred \$28 million, \$28 million, and \$4 million of non-deductible transaction costs for the years ended December 31, 2011, 2010, and 2009, respectively, which have been included in discontinued operations. The company has incurred total transaction costs in connection with the spin-off of approximately \$60 million.

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*National Security Technologies Deconsolidation* – Effective January 1, 2011, the company reduced its participation in the National Security Technologies joint venture (NSTec). As a result of the reduced participation in the joint venture, the company no longer consolidates NSTec's results in the consolidated financial statements. NSTec's sales that were included in the company's consolidated sales and service revenues for the year ended December 31, 2010 and 2009 were \$579 million, and \$568 million, respectively.

*2009* – In December 2009, the company sold Advisory Services Division (ASD) for \$1.65 billion in cash to an investor group led by General Atlantic, LLC, and affiliates of Kohlberg Kravis Roberts & Co. L.P., and recognized a gain of \$15 million, net of taxes. ASD was a business unit comprised of the assets and liabilities of TASC, Inc., its wholly-owned subsidiary TASC Services Corporation, and certain contracts carved out from other Northrop Grumman businesses also in Information Systems that provide systems engineering technical assistance (SETA) and other analysis and advisory services. Sales for ASD in the year ended December 31, 2009 were approximately \$1.5 billion. The assets, liabilities and operating results of this business unit are reported as discontinued operations in the consolidated statements of operations for all periods presented.

*Discontinued Operations* – Earnings for the Shipbuilding business and ASD, as well as gains from divestitures, are reported as discontinued operations in the following table:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Sales and service revenues	<b>\$1,646</b>	\$6,711	\$7,740
Earnings from discontinued operations	<b>59</b>	229	345
Income tax expense	<b>(28)</b>	(95)	(111)
Earnings, net of tax	<b>31</b>	134	234
Gain on divestitures	<b>2</b>	10	446
Income tax (expense) benefit	<b>(1)</b>	5	(428)
Gain on divestitures, net of tax	<b>1</b>	15	18
Earnings from discontinued operations, net of tax	<b>\$ 32</b>	\$ 149	\$ 252

Tax rates on discontinued operations vary from the company's effective tax rate generally due to the non-deductibility of goodwill for tax purposes and the effects, if any, of capital loss carryforwards.

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The major classes of assets and liabilities included in discontinued operations for the Shipbuilding business as of December 31, 2010, are as follows:

*\$ in millions*

<b>Assets</b>	
Current assets	\$ 1,315
Property, plant, and equipment, net	1,997
Goodwill	1,141
Other assets	759
Total assets of discontinued operations	\$ 5,212
<b>Liabilities</b>	
Trade accounts payable	\$ 274
Other current liabilities	955
Current liabilities	1,229
Other liabilities	1,563
Total liabilities of discontinued operations	\$ 2,792

**7. SEGMENT INFORMATION**

The company is aligned into four reportable segments: Aerospace Systems, Electronic Systems, Information Systems, and Technical Services.

The company, from time to time, acquires or disposes of businesses and realigns contracts, programs or business areas among and within its operating segments that possess similar customers, expertise, and capabilities. Internal realignments are designed to more fully leverage existing capabilities and enhance development and delivery of products and services.

*Segment Realignment* – In January 2010, the company transferred its internal information technology services unit from the Information Systems segment to the company's corporate shared services group. The intersegment sales and operating income for this unit that were previously recognized in the Information Systems segment are immaterial and have been eliminated for all periods presented.

*Intersegment Eliminations* – As of December 31, 2011, the company revised its reporting of intersegment cost of sales. Intersegment costs are now reported based on the predominant attributes of the customer contract, rather than the attributes of the intersegment work performed. As a result, in the consolidated statements of operations, cost of product sales have been retrospectively increased by \$746 million and \$318 million for 2010 and 2009, respectively, and cost of service revenues for the respective periods have been retrospectively decreased by the same amounts, while consolidated sales and service revenues, cost of sales and service revenues, and operating income remain unchanged.

*U.S. Government Sales* – Revenue from the U.S. Government (which includes Foreign Military Sales) includes revenue from contracts for which Northrop Grumman is the prime contractor as well as those for which the company is a subcontractor and the ultimate customer is the U.S. Government. All of the company's segments derive substantial revenue from the U.S. Government. Sales to the U.S. Government amounted to \$23.9 billion, \$25.5 billion, and \$25 billion, or 90.5 percent, 90.6 percent, and 90.3 percent, of total revenue for the years ended December 31, 2011, 2010, and 2009, respectively.

*Foreign Sales* – Direct foreign sales amounted to approximately \$1.6 billion, or approximately 6 percent, of total revenue for each of the years ended December 31, 2011, 2010, and 2009.

*Discontinued Operations* – The company's discontinued operations are excluded from all of the data elements in the following tables, except for assets by segment.

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*Assets* – Substantially all of the company’s operating assets are located or maintained in the U.S.

**Results of Operations By Segment**

The following table presents sales and service revenues and operating income by segment:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
<b>Sales and Service Revenues</b>			
Aerospace Systems	\$ 10,458	\$ 10,910	\$ 10,419
Electronic Systems	7,372	7,613	7,671
Information Systems	7,921	8,395	8,536
Technical Services	2,699	3,230	2,776
Intersegment eliminations	(2,038)	(2,005)	(1,752)
<b>Total sales and service revenues</b>	<b>\$26,412</b>	<b>\$ 28,143</b>	<b>\$27,650</b>

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
<b>Operating Income</b>			
Aerospace Systems	\$1,261	\$ 1,256	\$ 1,071
Electronic Systems	1,070	1,023	969
Information Systems	766	756	624
Technical Services	216	206	161
Intersegment eliminations	(258)	(231)	(190)
<b>Total Segment Operating Income</b>	<b>3,055</b>	<b>3,010</b>	<b>2,635</b>
Non-segment factors affecting operating income			
Unallocated corporate expenses	(166)	(182)	(100)
Net pension adjustment	400	10	(237)
Royalty income adjustment	(13)	(11)	(24)
<b>Total operating income</b>	<b>\$3,276</b>	<b>\$ 2,827</b>	<b>\$ 2,274</b>

*Unallocated Corporate Expenses* – Unallocated corporate expenses generally include the portion of corporate expenses not considered allowable or allocable under applicable U.S. Government Cost Accounting Standards (CAS) regulations and the Federal Acquisition Regulation (FAR), and therefore not allocated to the segments. Such costs consist of management and administration, legal, environmental, certain compensation costs, retiree benefits, and other expenses.

*Net Pension Adjustment* – The net pension adjustment reflects the difference between pension expense determined in accordance with GAAP and pension expense allocated to the operating segments determined in accordance with CAS. For the years ended December 31, 2011 and 2010, the net pension adjustment resulted in income of \$400 million and \$10 million, respectively. The increase in the net pension adjustment for the year ended December 31, 2011, is primarily due to decreased GAAP pension expense from higher investment income and greater plan investment assets.

*Royalty Income Adjustment* – Royalty income is included in segment operating income and reclassified to other income for financial reporting purposes.

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To encourage commerce between operating units, sales between segments are recorded at values that include a hypothetical margin for the performing segment based on that segment's estimated margin rate for external sales. Such hypothetical margins are eliminated in consolidation. Intersegment sales and operating income were as follows:

<i>\$ in millions</i>	Year Ended December 31					
	2011		2010		2009	
	Sales	Operating Income	Sales	Operating Income	Sales	Operating Income
<b>Intersegment sales and operating income</b>						
Aerospace Systems	\$ 134	\$ 18	\$ 132	\$ 13	\$ 121	\$ 13
Electronic Systems	649	131	684	118	650	103
Information Systems	687	68	623	61	474	44
Technical Services	568	41	566	39	507	30
<b>Total intersegment sales and operating income</b>	<b>\$ 2,038</b>	<b>\$258</b>	<b>\$2,005</b>	<b>\$231</b>	<b>\$1,752</b>	<b>\$190</b>

**Other Financial Information**

<i>\$ in millions</i>	December 31	
	2011	2010
<b>Assets</b>		
Aerospace Systems	\$ 6,574	\$ 6,548
Electronic Systems	4,705	4,893
Information Systems	7,144	7,467
Technical Services	1,303	1,381
Segment assets	19,726	20,289
Corporate (See Note 10)	5,685	5,909
Assets of discontinued operations		5,212
<b>Total assets</b>	<b>\$25,411</b>	<b>\$ 31,410</b>

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Corporate assets principally consist of cash and cash equivalents and deferred tax assets.

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
<b>Capital Expenditures from Continuing Operations</b>			
Aerospace Systems	\$ 184	\$ 195	\$ 211
Electronic Systems	121	176	168
Information Systems	41	31	50
Technical Services	1	5	3
Corporate	141	172	41
<b>Total capital expenditures from continuing operations</b>	<b>\$ 488</b>	<b>\$ 579</b>	<b>\$ 473</b>

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
<b>Depreciation and Amortization</b>			
Aerospace Systems	\$ 200	\$ 237	\$ 238
Electronic Systems	144	150	140
Information Systems	121	133	138
Technical Services	4	5	8
Corporate	75	30	26
<b>Total depreciation and amortization from continuing operations</b>	<b>\$ 544</b>	<b>\$ 555</b>	<b>\$ 550</b>

The depreciation and amortization expense above includes amortization of purchased intangible assets as well as amortization of deferred and other outsourcing costs.

**8. ACCOUNTS RECEIVABLE, NET**

Unbilled amounts represent sales for which billings have not been presented to customers at period-end. These amounts are usually billed and collected within one year. Progress payments are received on a number of firm fixed-price contracts. Unbilled amounts are presented net of progress payments of \$6.4 billion and \$5.7 billion at December 31, 2011, and 2010, respectively.

Accounts receivables at December 31, 2011, are expected to be collected in 2012, except for \$3 million due in 2013 and approximately \$5 million due in 2014 and later.

The company does not believe it has significant exposure to credit risk as accounts receivable and the related unbilled amounts are primarily due from the U.S. Government.

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Accounts receivable consisted of the following:

<i>\$ in millions</i>	December 31	
	2011	2010
<b>Due From U.S. Government</b>		
Amounts billed	\$ 812	\$ 900
Recoverable costs and accrued profit on progress completed - unbilled	1,594	1,718
	<b>2,406</b>	<b>2,618</b>
<b>Due From Other Customers</b>		
Amounts billed	249	280
Recoverable costs and accrued profit on progress completed - unbilled	363	458
	<b>612</b>	<b>738</b>
Total accounts receivable	<b>3,018</b>	<b>3,356</b>
Allowance for doubtful accounts	(54)	(27)
Total accounts receivable, net	<b>\$2,964</b>	<b>\$ 3,329</b>

**9. INVENTORIED COSTS, NET**

Inventoried costs consisted of the following:

<i>\$ in millions</i>	December 31	
	2011	2010
Production costs of contracts in process	\$ 1,629	\$ 1,521
General and administrative expenses	221	190
	<b>1,850</b>	<b>1,711</b>
Progress payments received	(1,100)	(962)
	<b>750</b>	<b>749</b>
Product inventory	123	147
Total inventoried costs, net	<b>\$ 873</b>	<b>\$ 896</b>

**10. INCOME TAXES**

The company's effective tax rate on earnings from continuing operations for the year ended December 31, 2011 was 32.3 percent, as compared with 19.5 percent and 30.7 percent for the years ended December 31, 2010 and 2009, respectively. The company's effective tax rate reflects deductions for domestic manufacturing and research tax credits, and a deduction for employee stock ownership plan dividends in all years, as well as the impact of settlements with the Internal Revenue Service (IRS) in 2010 and 2009.

During 2010, the company received final approval from the IRS and the U.S. Congressional Joint Committee on Taxation (Joint Committee) of the IRS' examination of the company's tax returns for the years 2004 through 2006. As a result of the settlement, the company recognized a net tax benefit of approximately \$298 million (of which \$66 million was in cash), which was recorded as a reduction to the company's provision for income taxes.

During 2009, the company reached a final settlement with the IRS regarding its audit of the company's tax returns for 2001 through 2003 and recognized \$75 million of net benefit upon settlement, including \$20 million of interest.



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Federal and foreign income tax expense consisted of the following:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
<b>Income Taxes on Continuing Operations</b>			
Currently payable			
Federal income taxes	\$ 592	\$ 394	\$ 390
Foreign income taxes	18	11	34
Total federal and foreign income taxes currently payable	610	405	424
Change in deferred federal and foreign income taxes	387	57	212
Total federal and foreign income taxes	\$ 997	\$ 462	\$ 636

The geographic source of earnings from continuing operations before income taxes is as follows:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Domestic	\$2,998	\$2,319	\$1,944
Foreign	85	47	126
Earnings from continuing operations before income taxes	\$3,083	\$2,366	\$2,070

Income tax expense differs from the amount computed by multiplying the statutory federal income tax rate times the earnings from continuing operations before income taxes due to the following:

<i>\$ in millions</i>	Year Ended December 31		
	2011	2010	2009
Income tax expense on continuing operations at statutory rate	\$1,079	\$ 828	\$725
Manufacturing deduction	(32)	(33)	(18)
Research tax credit	(17)	(12)	(15)
Settlement of IRS appeals cases, net of additional uncertain tax position accruals		(298)	(77)
ESOP dividends	(13)	(14)	(13)
Other, net	(20)	(9)	34
Total federal and foreign income taxes	\$ 997	\$ 462	\$636

*Uncertain Tax Positions* – As of December 31, 2011, the amount recorded for uncertain tax positions was a liability of \$135 million, which includes accrued interest and penalties of \$17 million. This liability is included in other long-term liabilities in the consolidated statements of financial position. If the income tax benefits from these tax positions are ultimately realized, \$95 million of federal benefits would affect the company's effective tax rate. The remaining \$40 million relates to state taxes and would be realized through operating income.

In 2010, in connection with the settlement agreement with IRS for years 2004 through 2006, the company reduced its liability for uncertain tax positions by \$311 million, including previously accrued interest, which was recorded as a reduction to the company's effective tax rate.

In 2009, in connection with the settlement agreement with IRS for years 2001 through 2003, the company reduced its liability for uncertain tax positions by \$60 million, which was recorded as a reduction to the company's effective tax rate.

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The change in unrecognized tax benefits during 2011, 2010 and 2009, excluding interest, is as follows:

<i>\$ in millions</i>	December 31		
	2011	2010	2009
Unrecognized tax benefits at beginning of the year	<b>\$126</b>	\$ 429	\$416
Additions based on tax positions related to the current year	<b>11</b>	19	12
Additions for tax positions of prior years	<b>31</b>	4	61
Reductions for tax positions of prior years	<b>(22)</b>		
Settlements	<b>(28)</b>	(326)	(60)
Net change in unrecognized tax benefits	<b>(8)</b>	(303)	13
Unrecognized tax benefits at end of the year	<b>\$118</b>	\$ 126	\$429

Although the company believes that it has adequately provided for all of its tax positions, amounts asserted by taxing authorities in future years could be greater than the company's accrued positions. Accordingly, additional provisions on income tax related matters could be recorded in the future due to revised estimates, settlement or other resolution of the underlying tax matters. The company does not expect the unrecognized tax benefits to significantly change in the next 12 months. The IRS is currently conducting an examination of the company's tax returns for the years 2007 through 2009.

During the years ended December 31, 2011, 2010 and 2009, the company recorded approximately \$(5) million, \$88 million, and \$6 million of net interest income/(expense), respectively, within its federal, foreign and state income tax provisions.

*Deferred Income Taxes* – Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and tax purposes. Such amounts are classified in the consolidated statements of financial position as current or noncurrent assets or liabilities based upon the classification of the related assets and liabilities.

The tax effects of significant temporary differences and carryforwards that gave rise to year-end deferred federal, state and foreign tax balances, as presented in the consolidated statements of financial position, are as follows:

<i>\$ in millions</i>	December 31	
	2011	2010
<b>Deferred Tax Assets</b>		
Retirement benefits	<b>\$1,819</b>	\$ 1,337
Provisions for accrued liabilities	<b>649</b>	686
Stock-based compensation	<b>130</b>	91
Other	<b>78</b>	10
Gross deferred tax assets	<b>2,676</b>	2,124
Less valuation allowance	<b>(50)</b>	
Net deferred tax assets	<b>2,626</b>	2,124
<b>Deferred Tax Liabilities</b>		
Goodwill amortization	<b>716</b>	692
Depreciation and amortization	<b>277</b>	143
Contract accounting differences	<b>218</b>	255
Purchased intangibles	<b>19</b>	14
Gross deferred tax liabilities	<b>1,230</b>	1,104
Total net deferred tax assets	<b>\$1,396</b>	\$ 1,020

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Realization of the deferred tax asset is primarily dependent on generating sufficient taxable income in future periods. The company believes it is more-likely-than-not that all deferred tax assets will be realized, net of any valuation allowances currently established.

At December 31, 2011, the company has available unused net operating losses that may be applied against future taxable income in Japan of \$16 million that will expire in 2015 through 2018, \$23 million in Norway, and \$153 million in the United Kingdom that may be used indefinitely. A valuation allowance of \$50 million has been recorded against the tax assets due to the uncertainty of the realization of these net operating losses and other deferred tax assets in foreign jurisdictions.

Net deferred tax assets as presented in the consolidated statements of financial position are as follows:

<i>\$ in millions</i>	December 31	
	2011	2010
Net current deferred tax assets	\$ 496	\$ 392
Net non-current deferred tax assets	900	628
Total net deferred tax assets	\$1,396	\$1,020

At December 31, 2011, the company completed a comprehensive review of its deferred income tax balances and determined that certain net deferred income tax assets were overstated and required correction. The company was able to determine that the overstatement relates to periods prior to January 1, 2007.

Management has evaluated the impact of the overstatement and concluded that the effect of the correction is not material to the company's consolidated statements of financial position, results of operations or cash flows for any period presented. In order to correct the overstatement, the company has reduced the opening retained earnings balance as of January 1, 2007 by \$121 million, which reduces opening retained earnings for the year ended December 31, 2009, from the originally reported amount of \$5.6 billion to \$5.5 billion.

*Foreign Income* – As of December 31, 2011, the company had approximately \$761 million of accumulated undistributed earnings generated by its foreign subsidiaries. No deferred tax liability has been recorded on these earnings since the company intends to permanently reinvest these earnings. Should these earnings be distributed in the form of dividends or otherwise, the distributions would be subject to U.S. federal income tax at the statutory rate of 35 percent, less foreign tax credits available to offset such distributions, if any. In addition, such distributions may be subject to withholding taxes in the various tax jurisdictions.

## 11. GOODWILL AND OTHER PURCHASED INTANGIBLE ASSETS

### Goodwill

Goodwill and other purchased intangible assets are included in the identifiable assets of the segment to which they have been assigned. Impairment tests are performed at least annually and more often as circumstances require. Any goodwill impairment, as well as the amortization of other purchased intangible assets, is charged against the respective segment's operating income. Our annual impairment test was performed as of November 30, 2011 for all segments. In performing the goodwill impairment tests, the company uses a discounted cash flow approach corroborated by comparative market multiples, where appropriate, to determine the fair value of its businesses. Accumulated goodwill impairment losses at December 31, 2011, and 2010, totaled \$570 million at the Aerospace Systems segment.

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The changes in the carrying amounts of goodwill for the years ended December 2011 and 2010, were as follows:

<i>\$ in millions</i>	Aerospace Systems	Electronic Systems	Information Systems	Technical Services	<b>Total</b>
Balance as of December 31, 2009 and 2010	\$3,801	\$2,402	\$5,248	\$925	<b>\$12,376</b>
Goodwill related to businesses sold		(2)			<b>(2)</b>
<b>Balance as of December 31, 2011</b>	<b>\$3,801</b>	<b>\$2,400</b>	<b>\$5,248</b>	<b>\$925</b>	<b>\$12,374</b>

*Segment Realignments* – In January 2009, the company realigned certain logistics, services, and technical support programs and transferred assets from the Information Systems and Electronic Systems segments to the Technical Services segment. As a result of this realignment, goodwill of approximately \$123 million was reallocated among these segments. Additionally during the first quarter of 2009, the company transferred certain optics and laser programs from the Information Systems segment to the Aerospace Systems segment, resulting in the reallocation of goodwill of approximately \$41 million.

**Purchased Intangible Assets**

The table below summarizes the company's aggregate purchased intangible assets:

<i>\$ in millions</i>	December 31, 2011			December 31, 2010		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Contract and program intangibles	<b>\$1,705</b>	<b>\$(1,567)</b>	<b>\$138</b>	\$1,705	\$(1,531)	\$174
Other purchased intangibles	<b>100</b>	<b>(83)</b>	<b>17</b>	100	(82)	18
<b>Total</b>	<b>\$1,805</b>	<b>\$(1,650)</b>	<b>\$155</b>	\$1,805	\$(1,613)	\$192

The company's purchased intangible assets are subject to amortization and are being amortized on a straight-line basis over an aggregate weighted-average period of 17 years. Aggregate amortization expense for 2011, 2010, and 2009, was \$37 million, \$71 million, and \$74 million, respectively.

As of December 31, 2011, the expected future amortization of purchased intangibles for each of the next five years is \$36 million in 2012, \$29 million in 2013, \$16 million in 2014, \$15 million in 2015, and \$11 million in 2016.

**12. FAIR VALUE OF FINANCIAL INSTRUMENTS**

The following table presents the fair value information for those assets and liabilities measured at fair value on a recurring basis:

<i>\$ in millions</i>	December 31, 2011		December 31, 2010	
	Carrying Value	Fair Value	Carrying Value	Fair Value
<b>Financial Assets (Liabilities)</b>				
Marketable Securities				
Trading	\$ 219	\$ 219	\$ 320	\$ 320
Available-for-Sale	4	4	10	10
Held-to-Maturity time deposits	250	250		
Derivatives	7	7	11	11
Long-term debt, including current portion	(3,940)	(4,675)	(4,724)	(5,100)

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There were no material transfers of financial instruments between the three levels of fair value hierarchy during the years ended December 31, 2011 and 2010. The carrying value of all other financial instruments approximate fair value due to their short-term nature.

*Investments in Marketable Securities* – The company holds a portfolio of marketable securities, consisting of equity securities that are classified as either trading or available-for-sale and can be liquidated without restriction. These assets are recorded at fair value and are valued using Level 1 inputs. In June 2011, the company sold marketable securities classified as trading securities for \$69 million, resulting in a \$3 million realized gain recorded in Other, net in the consolidated statements of operations. In addition, the company holds short term investments classified as held-to-maturity that are recorded at cost. As of December 31, 2011, held-to-maturity investments of \$250 million were included in prepaid expenses and other current assets and \$223 million of trading or available-for-sale securities were included in miscellaneous other assets on the consolidated statements of financial position. As of December 31, 2010, marketable securities of \$68 million were included in prepaid expenses and other current assets and \$262 million were included in miscellaneous other assets on the consolidated statements of financial position.

*Derivative Financial Instruments and Hedging Activities* – The company utilizes derivative financial instruments in order to manage exposure to interest rate risk and foreign currency exchange rate risk. Foreign currency forward contracts are used to manage foreign currency exchange rate risk related to receipts from customers and payments to suppliers denominated in foreign currencies.

The notional values of our derivative portfolio are summarized below:

<i>\$ in millions</i>	December 31	
	2011	2010
Designated as cash flow hedges:		
Foreign currency buy	\$ 36	\$ 40
Foreign currency sell	109	86
Interest rate swaps		200
Not designated as cash flow hedges:		
Foreign currency buy	12	8
Foreign currency sell	76	75
Total notional value	\$233	\$409

Derivative financial instruments are recognized as assets or liabilities in the financial statements and are measured at fair value, and substantially all of these instruments are valued using Level 2 inputs. Where model-derived valuations are appropriate, the company utilizes the income approach to determine fair value and uses the applicable London Interbank Offered Rate (LIBOR) swap rate as the discount rate.

Unrealized gains or losses on the effective cash flow hedges are reclassified from other comprehensive income to earnings upon the settlement of the underlying transactions. The derivative fair values and related unrealized gains and losses at December 31, 2011 and 2010, were not material.

*Cash Surrender Value of Life Insurance Policies* – The company maintains whole life insurance policies on a group of executives which are recorded at their cash surrender value as determined by the insurance carrier. Additionally, the company has split-dollar life insurance policies on former officers and executives from acquired businesses which are recorded at the lesser of their cash surrender value or premiums paid. The policies are utilized as a partial funding source for deferred compensation and other non-qualified employee retirement plans. As of December 31, 2011 and 2010, the carrying values associated with these policies of \$257 million and \$257 million, respectively, were recorded in miscellaneous other assets.

*Long-Term Debt* – The fair value of long-term debt was calculated using Level 2 inputs based on interest rates available for debt with terms and maturities similar to the company's existing debt arrangements.

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**13. LONG-TERM DEBT**

*Lines of Credit* – The company has available uncommitted short term credit lines in the form of money market facilities with several banks. The amount and conditions for borrowing under these credit lines depend on the availability and terms prevailing in the marketplace. No fees or compensating balances are required for these credit facilities.

*Credit Facility* – In September 2011, the Company entered into two senior unsecured credit facilities (the Credit Agreements) in an aggregate principal amount of \$2 billion. The first Credit Agreement amended the company's \$2 billion five-year credit facility dated August 10, 2007, by reducing the aggregate principal amount available under the facility by \$500 million to \$1.5 billion and extending the maturity date to September 2016. The second Credit Agreement is a new 364-day revolving credit facility in an aggregate principal amount of \$500 million. The credit facilities permit the company to request additional lending commitments of up to \$500 million from the lenders under the agreement or through other eligible lenders under certain circumstances. Borrowings under the credit facilities bear interest at various rates, including the LIBOR (or an alternate base rate), plus an incremental margin based on the company's credit ratings and credit default swap spread. The credit facilities also require a commitment fee based on the daily aggregate unused amount of commitments and the company's credit ratings, and contain a financial covenant relating to a maximum debt to capitalization ratio, and certain restrictions on additional asset liens. There were no borrowings under the facilities in the years ended December 31, 2011 and 2010 and no balances outstanding under the credit facilities at December 31, 2011 and 2010. As of December 31, 2011, the company was in compliance with all covenants under these Credit Agreements.

*Debt Tender Offers* – In November 2010, the company made a tender offer for \$1.9 billion of debt securities issued by its subsidiary Northrop Grumman Systems Corporation and maturing in 2016 to 2036 with interest rates ranging from 6.98 percent to 7.875 percent. Approximately \$682 million in aggregate principal amount was purchased for a total price of \$919 million (including accrued and unpaid interest on the securities). The company recorded a pre-tax charge of \$229 million principally related to the premiums paid on the debt tendered.

*Debt Issuance* – In November 2010, the company issued \$500 million of 5-year, \$700 million of 10-year, and \$300 million of 30-year unsecured senior obligations. Interest on the notes is payable semi-annually in arrears at fixed rates of 1.85 percent, 3.50 percent, and 5.05 percent per annum, and the notes will mature on November 15, 2015, March 15, 2021 and November 15, 2040, respectively. These senior notes are subject to redemption at the company's discretion at any time prior to maturity in whole or in part at the principal amount plus any make-whole premium and accrued and unpaid interest.

In July 2009, the company issued \$350 million of 5-year and \$500 million of 10-year unsecured senior obligations. Interest on the notes is payable semi-annually in arrears at fixed rates of 3.70 percent and 5.05 percent per annum, and the notes will mature on August 1, 2014, and August 1, 2019, respectively. These senior notes are subject to redemption at the company's discretion at any time prior to maturity in whole or in part at the principal amount plus any make-whole premium and accrued and unpaid interest.

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Long-term debt consists of the following:

<i>\$ in millions</i>		December 31	
		2011	2010
<b>Fixed-rate notes and debentures, maturing in</b>	<b>Interest rate</b>		
2011	7.13%		\$ 769
2014	3.70%	\$ 350	350
2015	1.85%	500	500
2016	7.75%	107	107
2018	6.75%	200	200
2019	5.05%	500	500
2021	3.50%	700	700
2026	7.81%	527	527
2031	7.75%	466	466
2040	5.05%	300	300
Capital leases	Various	37	41
Other	Various	253	254
Total long-term debt		3,940	4,714
Less current portion		5	774
Long-term debt, net of current portion		\$3,935	\$3,940

Indentures underlying long-term debt issued by the company or its subsidiaries contain various restrictions with respect to the issuer, including one or more restrictions relating to limitations on liens, sale-leaseback arrangements, and funded debt of subsidiaries.

Maturities of long-term debt as of December 31, 2011, are as follows:

<i>\$ in millions</i>	
Year Ending December 31	
2012	\$ 5
2013	5
2014	353
2015	502
2016	109
Thereafter	2,955
Total principal payments	3,929
Unamortized premium on long-term debt, net of discount	11
Total long-term debt	\$ 3,940

The premium on long-term debt primarily represents non-cash fair market value adjustments resulting from acquisitions, which are amortized over the life of the related debt.

## NORTHROP GRUMMAN CORPORATION

### 14. INVESTIGATIONS, CLAIMS AND LITIGATION

*Spin-Off of Shipbuilding Business* – As provided in the Separation and Distribution Agreement with HII described in Note 6, HII generally has responsibility for investigations, claims and litigation matters related to the Shipbuilding business. The company has therefore excluded from this report certain previously disclosed Shipbuilding-related investigations, claims and litigation matters for which HII has lead responsibility. The company does not believe these HII matters are likely to have a material adverse effect on the company's consolidated financial position as of December 31, 2011 or its annual results of operations or cash flows.

#### **Litigation**

The company is one of several defendants in litigation brought by the Orange County Water District in Orange County Superior Court in California on December 17, 2004, for alleged contribution to volatile organic chemical contamination of the County's shallow groundwater. The lawsuit includes counts against the defendants for violation of the Orange County Water District Act, the California Super Fund Act, negligence, nuisance, trespass and declaratory relief. Among other things, the lawsuit seeks unspecified damages for the cost of remediation, payment of attorney fees and costs, and punitive damages. Trial on the statutory claims is scheduled to begin on February 10, 2012.

On March 27, 2007, the U.S. District Court for the Central District of California consolidated two Employee Retirement Income Security Act (ERISA) lawsuits that had been separately filed on September 28, 2006, and January 3, 2007, into In Re Northrop Grumman Corporation ERISA Litigation. The plaintiffs filed a consolidated Amended Complaint on September 15, 2010, alleging breaches of fiduciary duties by the Administrative Committees and the Investment Committees (as well as certain individuals who served on or supported those Committees) for two 401(k) Plans sponsored by Northrop Grumman Corporation. The company itself is not a defendant in the lawsuit. The plaintiffs claim that these alleged breaches of fiduciary duties caused the Plans to incur excessive administrative and investment fees and expenses to the detriment of the Plans' participants. On August 6, 2007, the District Court denied plaintiffs' motion for class certification, and the plaintiffs appealed the District Court's decision on class certification to the U.S. Court of Appeals for the Ninth Circuit. On September 8, 2009, the Ninth Circuit vacated the Order denying class certification and remanded the issue to the District Court for further consideration. As required by the Ninth Circuit's Order, the case was also reassigned to a different judge. By order dated March 29, 2011, the District Court granted the plaintiffs' motion for class certification. The District Court held a hearing on May 16, 2011 on various cross motions for summary judgment. The supplemental briefing requested by the District Court has been filed and the motions have been submitted. No trial date has been set.

On June 22, 2007, a putative class action was filed against the Northrop Grumman Pension Plan and the Northrop Grumman Retirement Plan B and their corresponding administrative committees, styled as *Skinner et al. v. Northrop Grumman Pension Plan, etc., et al.*, in the U.S. District Court for the Central District of California. The putative class representatives alleged violations of ERISA and breaches of fiduciary duty concerning a 2003 modification to the Northrop Grumman Retirement Plan B. The modification relates to the employer-funded portion of the pension benefit available during a five-year transition period that ended on June 30, 2008. The plaintiffs dismissed the Northrop Grumman Pension Plan, and in 2008, the District Court granted summary judgment in favor of all remaining defendants on all claims. The plaintiffs appealed, and in May 2009, the U.S. Court of Appeals for the Ninth Circuit reversed the decision of the District Court and remanded the matter back to the District Court for further proceedings, finding that there was ambiguity in a 1998 summary plan description related to the employer-funded component of the pension benefit. After the remand, the plaintiffs filed a motion to certify a class. The parties also filed cross-motions for summary judgment. On January 26, 2010, the District Court granted summary judgment in favor of the Plan and denied the plaintiffs' motion for summary judgment. The District Court also denied the plaintiffs' motion for class certification and struck the trial date of March 23, 2010, as unnecessary given the District Court's grant of summary judgment for the Plan. The plaintiffs appealed the District Court's order to the Ninth Circuit and we are awaiting a decision. Oral argument is set for February 9, 2012.



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The company is a party to various other investigations, lawsuits, claims and other legal proceedings, including government investigations and claims, that arise in the ordinary course of our business. Based on information available to the company to date, the company does not believe that the outcome of any matter pending against the company, including the matters specifically identified above, is likely to have a material adverse effect on the company's consolidated financial position as of December 31, 2011 or its annual results of operations or cash flows.

### **15. COMMITMENTS AND CONTINGENCIES**

*Contract Performance Contingencies* – Contract profit margins may include estimates of revenues not contractually agreed to between the customer and the company for matters such as settlements in the process of negotiation, contract changes, claims and requests for equitable adjustment for previously unanticipated contract costs. These estimates are based upon management's best assessment of the underlying causal events and circumstances, and are included in determining contract profit margins to the extent of expected recovery based on contractual entitlements and the probability of successful negotiation with the customer. As of December 31, 2011, the recognized amounts related to claims and requests for equitable adjustment are not material individually or in the aggregate.

*Contract Terminations* – The company's U. S. Government contracts generally contain provisions that enable the customer to terminate a contract for default, or for the convenience of the government. In general, a partial or complete termination for default can result from a contractor's actual or anticipated failure to perform its contractual obligations. In most instances, the government is required to provide written notice to the contractor of the performance deficiency and allow the contractor a specified period of time to cure the deficiency or explain why the contract should not be terminated. If the contract is terminated for default, the contractor may not be entitled to recover any of its costs on partially completed work and may be liable to the government for any excess re-procurement costs of acquiring similar products or services from another contractor, and for certain other damages.

Termination of a contract for the convenience of the government may occur when the government concludes it is in the best interests of the U. S. Government that the contract be terminated. Under a termination for convenience, the contractor is typically paid in accordance with the contract's terms for costs incurred under the contract prior to the effective date of termination, plus a reasonable profit or fee and settlement expenses.

In either termination event, the amount the contractor ultimately receives in settlement on the contract is subject to negotiation and agreement with the U. S. Government. If the parties are unable to reach a settlement, the amount may be unilaterally determined by the government, subject to judicial review. If the contractor incurs costs in excess of the amount of funds obligated on the contract, it is at risk for reimbursement of those costs unless additional appropriated funds are available. Most, but not all, of the company's U. S. Government contracts provide funding for the customer's contract termination liabilities such that the company is not at risk for recovery of its properly determined contract termination claims. At December 31, 2011, the company had no substantial contract terminations in process for which the customer had insufficient termination funding.

*Guarantees of Subsidiary Performance Obligations* – From time to time in the ordinary course of business, the company guarantees obligations of its subsidiaries under certain contracts. Generally, the company is liable under such an arrangement only if its subsidiary is unable to perform under its contract. Historically, the company has not incurred any substantial liabilities resulting from these guarantees.

In addition, the company's subsidiaries may enter into joint ventures, teaming and other business arrangements (collectively, Business Arrangements) to support the company's products and services in domestic and international markets. The company generally strives to limit its exposure under these arrangements to its subsidiary's investment in the Business Arrangements, or to the extent of such subsidiary's obligations under the applicable contract. In some cases, however, the company may be required to guarantee performance by the Business Arrangements and, in such cases, the company generally obtains cross-indemnification from the other members of the Business Arrangements.

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At December 31, 2011, the company is not aware of any existing event of default that would require it to satisfy any of these guarantees.

*Environmental Matters* – The estimated costs to complete remediation has been accrued where the company believes, based on the facts and circumstances known to us, that it is probable that the company will incur costs to address environmental impacts at currently or formerly owned or leased operating facilities, or at sites where it has been named a Potentially Responsible Party (PRP) by the Environmental Protection Agency, or similarly designated by other environmental agencies. These accruals do not include any legal costs, nor do they include amounts recorded as asset retirement obligations. To assess the potential impact on the company's consolidated financial statements, management estimates the range of reasonably possible remediation costs that could be incurred by the company, taking into account facts currently available to the company regarding each site as well as the current state of technology and prior experience. These estimates are reviewed periodically and adjusted to reflect changes in facts and circumstances.

As of December 31, 2011 management estimates the range of reasonably possible future costs for environmental remediation is \$294 million to \$752 million, before considering the amount recoverable through overhead charges on U.S. Government contracts. At December 31, 2011, the amount accrued for probable environmental remediation costs was \$322 million, of which \$86 million is accrued in other current liabilities and \$236 million is accrued in other long-term liabilities. As of December 31, 2010, \$106 million was accrued in other current liabilities and \$207 million was accrued in other long-term liabilities. A portion of the environmental remediation costs is expected to be recoverable through overhead charges on government contracts and, accordingly, such amounts are deferred in inventoried costs (current portion) and miscellaneous other assets (non-current portion). As of December 31, 2011, \$59 million is deferred in inventoried costs and \$132 million is deferred in miscellaneous other assets. As of December 31, 2010, \$61 million was deferred in inventoried costs and \$124 million was deferred in miscellaneous assets. These amounts are evaluated for recoverability on a routine basis.

Factors that could result in changes to the company's estimates include, but are not limited to: modifications of planned remedial actions, increases or decreases in the estimated time required to remediate, changes to the determination of responsible parties and their ability to pay, changes in the level of estimated contamination, changes in laws and regulations affecting remediation requirements, improvements in remediation technology, and changes in estimated amounts recoverable through overhead charges on government contracts. In addition, there are some potential remediation sites where the costs of remediation cannot be reasonably estimated. Although management cannot predict whether new information gained as projects progress will materially affect the estimated liability accrued, management does not anticipate that future remediation expenditures will have a material adverse effect on the company's consolidated financial position as of December 31, 2011 or its annual results of operations or cash flows.

*Financial Arrangements* – In the ordinary course of business, the company uses standby letters of credit and guarantees issued by commercial banks and surety bonds issued principally by insurance companies to guarantee the performance on certain obligations. At December 31, 2011, there were \$195 million of stand-by letters of credit, \$186 million of bank guarantees, and \$139 million of surety bonds outstanding.

*Indemnifications* – The company has retained certain warranty, environmental, income tax, and other potential liabilities in connection with certain of its divestitures. The settlement of these liabilities is not expected to have a material adverse effect on the company's consolidated financial position as of December 31, 2011 or its annual results of operations or cash flows.

*U.S. Government Cost Claims* – From time to time, the company is advised of claims and penalties concerning certain potential disallowed costs. When such findings are presented, the company and the U.S. Government representatives engage in discussions to enable the company to evaluate the merits of these claims, as well as to assess the amounts being claimed. Where appropriate, provisions are made to reflect the company's expected exposure to the matters raised by the U.S. Government representatives and such provisions are reviewed on a quarterly basis for sufficiency based on the most recent information available. The company believes that it has

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adequately reserved for any disputed amounts and that the outcome of any such matters would not have a material adverse effect on its consolidated financial position as of December 31, 2011 or its annual results of operations or cash flows.

*Operating Leases* – Rental expense for operating leases, excluding discontinued operations, was \$420 million in 2011, \$448 million in 2010, and \$502 million in 2009. These amounts are net of immaterial amounts of sublease rental income. Minimum rental commitments under long-term non-cancellable operating leases as of December 31, 2011, total approximately \$1.2 billion, which are payable as follows: 2012 - \$297 million; 2013 - \$234 million; 2014 - \$208 million; 2015 - \$176 million; 2016 - \$136 million and thereafter - \$168 million.

*Related Party Transactions* – For all periods presented, the company had no material related party transactions.

*Spin-off of Shipbuilding Business* – Under the Separation and Distribution Agreement with HII described in Note 6, from and after the spin-off transaction, HII assumed responsibility for certain commitments and contingencies related to the Shipbuilding business and agreed to indemnify the company for losses related to these commitments and contingencies. The company has therefore excluded from this report previously disclosed Shipbuilding-related commitments and contingencies now assumed by HII.

A subsidiary of the company has guaranteed HII's outstanding \$84 million Economic Development Revenue Bonds (Ingalls Shipbuilding, Inc. Project), Taxable Series 1999A. The immaterial fair value of this guarantee was recorded in other long-term liabilities. In addition, HII has assumed the responsibility for the payment and performance of all outstanding indebtedness, obligations and liabilities of the company under this guarantee, and has agreed to indemnify the company against all liabilities that may be incurred in connection with this guarantee.

## **16. RETIREMENT BENEFITS**

### **Plan Descriptions**

*Defined Benefit Pension Plans* – The company sponsors several defined benefit pension plans in the U.S. covering the majority of its employees. Pension benefits for most employees are based on the employee's years of service, age and compensation. It is the policy of the company to fund at least the minimum amount required for all qualified plans, using actuarial cost methods and assumptions acceptable under U.S. Government regulations, by making payments into benefit trusts separate from the company. The pension benefit for most employees is based upon criteria whereby employees earn age and service points over their employment period.

*Defined Contribution Plans* – The company also sponsors 401(k) defined contribution plans in which most employees are eligible to participate, as well as certain bargaining unit employees. Company contributions for most plans are based on a cash matching of employee contributions up to 4 percent of compensation. The company also participates in a multiemployer plan for certain of the company's union employees. In addition to the 401(k) defined contribution benefit, certain employees hired after June 30, 2008, are eligible to participate in a defined contribution program in lieu of a defined benefit pension plan. The company's contributions to these defined contribution plans for the years ended December 31, 2011, 2010, and 2009, were \$297 million, \$288 million, and \$291 million, respectively.

*Non-U.S. Benefit Plans* – The company sponsors several benefit plans for non-U.S. employees. These plans are designed to provide benefits appropriate to local practice and in accordance with local regulations. Some of these plans are funded using benefit trusts that are separate from the company.

*Medical and Life Benefits* – The company provides a portion of the costs for certain health care and life insurance benefits for a substantial number of its active and retired employees. Certain covered employees achieve eligibility to participate in these contributory plans upon retirement from active service if they meet specified age and years of service requirements. Qualifying dependents are also eligible for medical coverage. Approximately 55 percent of the company's current retirees participate in the medical plans. The company reserves the right to amend or terminate the plans at any time. In November 2006, the company adopted plan amendments and communicated to plan participants that it would cap the amount of its contributions to substantially all of its remaining post retirement medical and life benefit plans that were previously not subject to limits on the company's contributions.

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In addition to a medical inflation cost-sharing feature, the plans also have provisions for deductibles, co-payments, coinsurance percentages, out-of-pocket limits, conformance to a schedule of reasonable fees, the use of managed care providers, and coordination of benefits with other plans. The plans also provide for a Medicare carve-out. Subsequent to January 1, 2005 (or earlier at some segments), newly hired employees are not eligible for post employment medical and life benefits.

The effect of the Medicare prescription drug subsidy from the Medicare Prescription Drug, Improvement and Modernization Act of 2003 to reduce the company's net periodic post-retirement benefit cost and accumulated post-retirement benefit obligation for the periods presented was not material. Pursuant to the new healthcare law described below, the tax benefits related to Medicare Part D subsidies will expire on December 31, 2012.

*Health Care Legislation* – The Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act became law during the first quarter of 2010. The provisions of these new laws affected the company's costs of providing health care benefits to its employees beginning this year. The company participated in the Early Retiree Reinsurance Program and continues to assess the extent to which the provisions of the new laws will affect its future health care and related employee benefit plan costs.

*Spin-off of Shipbuilding Business* – As a result of the spin-off of HII discussed in Note 6, the company reclassified to assets and liabilities of discontinued operations, certain pension and other post-retirement benefit plan assets and liabilities related exclusively to Shipbuilding employees and the Shipbuilding portion of Northrop Grumman pension and other post-retirement benefit plans that included Shipbuilding employees.

**Summary Plan Results**

The cost to the company of its retirement benefit plans in each of the three years ended December 31 is shown in the following table:

<i>\$ in millions</i>	Year Ended December 31					
	Pension Benefits			Medical and Life Benefits		
	2011	2010	2009	2011	2010	2009
<b>Components of Net Periodic Benefit Cost</b>						
Service cost	\$ 520	\$ 531	\$ 547	\$ 32	\$ 34	\$ 34
Interest cost	1,223	1,212	1,180	114	117	124
Expected return on plan assets	(1,690)	(1,517)	(1,366)	(62)	(56)	(48)
Amortization of:						
Prior service cost (credit)	23	35	34	(51)	(51)	(51)
Net loss from previous years	162	206	289	17	18	19
Other			21	(6)		
<b>Net periodic benefit cost</b>	<b>\$ 238</b>	<b>\$ 467</b>	<b>\$ 705</b>	<b>\$ 44</b>	<b>\$ 62</b>	<b>\$ 78</b>

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The table below summarizes the components of changes in unamortized benefit plan costs for the years ended December 31, 2011, 2010, and 2009:

<i>\$ in millions</i>	Pension Benefits	Medical and Life Benefits	Total
<b>Changes in unamortized benefit plan costs</b>			
Change in net actuarial loss	\$ (524)	\$ (60)	\$ (584)
Change in prior service cost	5		5
Amortization of			
Prior service (cost) credit	(50)	59	9
Net loss from previous years	(337)	(28)	(365)
Tax expense related to above items	363	11	374
Change in unamortized benefit plan costs – 2009	\$ (543)	\$ (18)	\$ (561)
Change in net actuarial loss	\$ (158)	\$ (64)	\$ (222)
Amortization of			
Prior service (cost) credit	(48)	60	12
Net loss from previous years	(244)	(26)	(270)
Tax expense related to above items	171	12	183
Change in unamortized benefit plan costs – 2010	\$ (279)	\$ (18)	\$ (297)
Change in net actuarial loss	<b>\$ 2,687</b>	<b>\$ 138</b>	<b>\$ 2,825</b>
Change in prior service cost	(608)	6	(602)
Amortization of			
Prior service (cost) credit	(23)	51	28
Net loss from previous years	(162)	(17)	(179)
Tax benefit related to above items	(752)	(71)	(823)
<b>Change in unamortized benefit plan costs – 2011</b>	<b>\$ 1,142</b>	<b>\$ 107</b>	<b>\$ 1,249</b>

Unamortized benefit plan costs consist primarily of accumulated net after-tax actuarial losses totaling \$3.9 billion and \$2.8 billion as of December 31, 2011 and 2010, respectively. The change in net actuarial loss from pension benefits in 2011 was primarily due to a \$1.2 billion after tax impact from the reduction in the discount rate assumption to 5.03 percent at December 31, 2011, from 5.75 percent at December 31, 2010. Net actuarial gains or losses are re-determined annually and principally arise from gains or losses on plan assets due to variations in the fair market value of the underlying assets and changes in the benefit obligation due to changes in actuarial assumptions. Net actuarial gains or losses are amortized to expense in future periods when they exceed ten percent of the greater of plan assets or projected benefit obligations by benefit plan. The excess of gains or losses over the ten percent threshold are subject to amortization over the average future service period of employees of approximately ten years.

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In December 2011, the company adopted certain changes in its defined benefit pension plans designed to enable the company to remain competitive within its marketplace and provide the affordability its customers require. These changes represent modifications to the defined benefits available to employees hired prior to July 1, 2008 who retire beginning after December 31, 2012. As a result of these changes, the company recognized a reduction of approximately \$640 million in its projected benefit obligations for the affected employee groups as of December 31, 2011. Due to these changes, certain nonqualified benefit plans experienced curtailments, however the net impact of these curtailment events was not material.

<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	
	2011	2010	2011	2010
<b>Amounts Recorded in Accumulated Other Comprehensive Loss</b>				
Net actuarial loss	<b>\$(6,131)</b>	\$ (4,246)	<b>\$(331)</b>	\$ (361)
Prior service (cost) credit	<b>537</b>	(194)	<b>149</b>	238
Income tax benefits related to above items	<b>2,215</b>	1,752	<b>74</b>	49
Unamortized benefit plan costs	<b>\$(3,379)</b>	\$(2,688)	<b>\$(108)</b>	\$ (74)

The following tables set forth the funded status and amounts recognized in the consolidated statements of financial position for the company's defined benefit pension and retiree health care and life insurance benefit plans. Pension benefits data includes the qualified plans as well as 11 domestic unfunded non-qualified plans for benefits provided to directors, officers, and certain employees. The company uses a December 31 measurement date for all of its plans.

<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	
	2011	2010	2011	2010
<b>Change in Projected Benefit Obligation</b>				
Projected benefit obligation at beginning of year	<b>\$21,820</b>	\$20,661	<b>\$2,104</b>	\$2,104
Service cost	<b>520</b>	531	<b>32</b>	34
Interest cost	<b>1,223</b>	1,212	<b>114</b>	117
Plan participants' contributions	<b>14</b>	10	<b>82</b>	82
Plan amendments	<b>(608)</b>		<b>6</b>	
Actuarial loss (gain)	<b>2,379</b>	633	<b>107</b>	(27)
Benefits paid	<b>(1,197)</b>	(1,176)	<b>(224)</b>	(222)
Other	<b>(22)</b>	(51)	<b>14</b>	16
Projected benefit obligation at end of year	<b>\$24,129</b>	\$ 21,820	<b>\$2,235</b>	\$ 2,104

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<i>\$ in millions</i>	Pension Benefits		Medical and Life Benefits	
	2011	2010	2011	2010
<b>Change in Plan Assets</b>				
Fair value of plan assets at beginning of year	\$20,081	\$18,184	\$ 932	\$ 843
Gain on plan assets	1,342	2,320	31	108
Employer contributions	1,084	789	111	105
Plan participants' contributions	14	10	82	82
Benefits paid	(1,197)	(1,176)	(224)	(222)
Other	16	(46)	14	16
Fair value of plan assets at end of year	21,340	20,081	946	932
Funded status	\$ (2,789)	\$ (1,739)	\$ (1,289)	\$ (1,172)
<b>Amounts Recognized in the Consolidated Statements of Financial Position</b>				
Non-current assets	\$ 112	\$ 275	\$ 41	\$ 45
Current liability	(104)	(94)	(48)	(48)
Non-current liability	(2,797)	(1,920)	(1,282)	(1,169)

The following table shows those amounts expected to be recognized in net periodic benefit cost in 2012:

<i>\$ in millions</i>	Pension Benefits	Medical and Life Benefits
<b>Amounts Expected to be Recognized in 2012 Net Periodic Benefit Cost</b>		
Net actuarial loss	\$427	\$ 21
Prior service cost (credit)	(58)	(51)

The accumulated benefit obligation for all defined benefit pension plans was \$23.6 billion and \$20.5 billion at December 31, 2011 and 2010, respectively.

Amounts for pension plans with accumulated benefit obligations in excess of fair value of plan assets are as follows:

<i>\$ in millions</i>	December 31	
	2011	2010
Projected benefit obligation	\$22,451	\$5,897
Accumulated benefit obligation	21,949	5,314
Fair value of plan assets	19,550	4,447

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**Plan Assumptions**

On a weighted-average basis, the following assumptions were used to determine the benefit obligations and the net periodic benefit cost:

	Pension Benefits		Medical and Life Benefits	
	2011	2010	2011	2010
<b>Assumptions Used to Determine Benefit Obligation at December 31</b>				
Discount rate	5.03%	5.75%	5.02%	5.62%
Rate of compensation increase	2.75%	3.50%		
Initial health care cost trend rate assumed for the next year			7.50%	8.00%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)			5.00%	5.00%
Year that the rate reaches the ultimate trend rate			2017	2017
<b>Assumptions Used to Determine Benefit Cost for the Year Ended December 31</b>				
Discount rate	5.75%	6.03%	5.62%	5.77%
Expected long-term return on plan assets	8.50%	8.50%	6.86%	6.90%
Rate of compensation increase	3.50%	3.75%		
Initial health care cost trend rate assumed for the next year			8.00%	7.00%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)			5.00%	5.00%
Year that the rate reaches the ultimate trend rate			2017	2014

The discount rate is generally based on the yield on high-quality corporate fixed-income investments. At the end of each year, the discount rate is primarily determined using a portfolio of high quality bonds matching the notional cash inflows with the expected benefit payments for each significant benefit plan.

The assumptions used for pension benefits are consistent with those used for retiree medical and life insurance benefits. The long-term rate of return on plan assets used for the medical and life benefits are reduced to allow for the impact of tax on expected returns as, unlike the pension trust, the earnings of certain Voluntary Employee Beneficiary Association (VEBA) trusts are taxable.

Through consultation with investment advisors, expected long-term returns for each of the plans' strategic asset classes were developed. Several factors were considered, including survey of investment managers' expectations, current market data such as yields/price-earnings ratios, and historical market returns over long periods. Using policy target allocation percentages and the asset class expected returns, a weighted-average expected return was calculated. A one-percentage-point change in the initial through the ultimate health care cost trend rates would have the following effects:

<i>\$ in millions</i>	1-Percentage-Point Increase	1-Percentage-Point Decrease
<b>Increase (Decrease) From Change In Health Care Cost Trend Rates To</b>		
Post-retirement benefit expense	\$ 5	\$ (6)
Post-retirement benefit liability	64	(75)

**Plan Assets and Investment Policy**

Plan assets are invested in various asset classes that are expected to produce a sufficient level of diversification and investment return over the long term. The investment goal is to exceed the assumed actuarial rate of return over



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the long term within reasonable and prudent levels of risk. Liability studies are conducted on a regular basis to provide guidance in setting investment goals with an objective to balance risk. Risk targets are established and monitored against acceptable ranges.

All investment policies and procedures are designed to ensure that the plans' investments are in compliance with ERISA. Guidelines are established defining permitted investments within each asset class. Derivatives are used for transitioning assets, asset class rebalancing, managing currency risk, and for management of fixed income and alternative investments. For the majority of the plans' assets, the investment policies require that the asset allocation be maintained within the following ranges as of December 31, 2011:

	Asset Allocation Ranges
Domestic equities	10% -30%
International equities	5% - 25%
Fixed income securities	30% -50%
Real estate and other	15% -30%

The table below provides the fair values of the company's pension and VEBA trust plan assets at December 31, 2011, and 2010, by asset category. The table also identifies the level of inputs used to determine the fair value of assets in each category (see Note 1 for definition of levels). The significant amount of Level 2 investments in the table results from including in this category investments in pooled funds that contain investments with values based on quoted market prices, but for which the funds are not valued on a quoted market basis, and fixed income securities that are valued using model based pricing services.

<i>\$ in millions</i>	Level 1		Level 2		Level 3		Total	
	2011	2010	2011	2010	2011	2010	2011	2010
<b>Asset Category</b>								
Domestic equities	<b>\$3,849</b>	\$3,948	<b>\$ 1</b>	\$ 3	<b>\$ 2</b>	\$ 2	<b>\$ 3,852</b>	\$ 3,953
International equities	<b>1,266</b>	1,406	<b>1,716</b>	\$ 1,868			<b>2,982</b>	3,274
Fixed income securities								
Cash and cash equivalents <sup>(1)</sup>	<b>75</b>	92	<b>1,528</b>	1,111			<b>1,603</b>	1,203
U.S. Treasuries			<b>1,872</b>	1,381			<b>1,872</b>	1,381
Other U.S. Government Agency Securities			<b>965</b>	715			<b>965</b>	715
Non-U.S. Government Securities			<b>324</b>	224			<b>324</b>	224
Corporate debt			<b>3,686</b>	3,512			<b>3,686</b>	3,512
Asset backed			<b>525</b>	758	<b>4</b>	4	<b>529</b>	762
High yield debt			<b>977</b>	992	<b>41</b>	78	<b>1,018</b>	1,070
Bank loans			<b>150</b>	115			<b>150</b>	115
Real estate and other								
Hedge funds					<b>1,405</b>	1,521	<b>1,405</b>	1,521
Private equities					<b>2,098</b>	1,945	<b>2,098</b>	1,945
Real estate					<b>1,788</b>	1,402	<b>1,788</b>	1,402
Other <sup>(2)</sup>			<b>14</b>	(64)			<b>14</b>	(64)
<b>Fair value of plan assets at the end of the year</b>	<b>\$5,190</b>	\$5,446	<b>\$11,758</b>	\$10,615	<b>\$5,338</b>	\$4,952	<b>\$22,286</b>	\$21,013

(1) Cash and cash equivalents are predominantly held in money market funds.

(2) Other includes futures, swaps, options, and insurance contracts in place year end.

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The changes in the fair value of the pension and VEBA plan trust assets measured using Level 3 significant unobservable inputs during 2011 and 2010, are as follows:

<i>\$ in millions</i>	Domestic equities	Asset Backed	High yield debt	Hedge funds	Private equities	Real Estate	<b>Total</b>
<b>Balance as of December 31, 2009</b>	\$ 2	\$4	\$59	\$ 1,282	\$1,651	\$ 870	\$ 3,868
Actual return on plan assets:							
Assets still held at reporting date	2		18	120	200	103	443
Assets sold during the period						(9)	(9)
Purchases, sales, and settlements	(2)			89	63	405	555
Changes in asset allocation mix			1	30	31	33	95
<b>Balance as of December 31, 2010</b>	\$ 2	\$4	\$ 78	\$1,521	\$ 1,945	\$1,402	\$4,952
Actual return on plan assets:							
Assets still held at reporting date			(2)	(43)	19	198	172
Assets sold during the period				25	(13)	(4)	8
Purchases			10	413	503	460	1,386
Sales			(45)	(511)	(356)	(268)	(1,180)
<b>Balance as of December 31, 2011</b>	\$ 2	\$4	\$ 41	\$ 1,405	\$ 2,098	\$ 1,788	\$ 5,338

Generally, investments are valued based on information in financial publications of general circulation, statistical and valuation services, records of security exchanges, appraisal by qualified persons, transactions and bona fide offers. Domestic and international equities consist primarily of common stocks and institutional common trust funds. Investments in common and preferred shares are valued at the last reported sales price of the stock on the last business day of the reporting period. Units in common trust funds and hedge funds are valued based on the redemption price of units owned by the trusts at year-end. Fair value for real estate and private equity partnerships is primarily based on valuation methodologies that include third party appraisals, comparable transactions, discounted cash flow valuation models, and public market data.

Non-government fixed income securities are invested across various industry sectors and credit quality ratings. Generally, investment guidelines are written to limit securities, for example, to no more than 5 percent of each trust account, and to exclude the purchase of securities issued by the company. The number of real estate and private equity partnerships is 162 and the unfunded commitments are \$882 million and \$1.2 billion as of December 31, 2011, and 2010, respectively. For alternative investments that cannot be redeemed, such as limited partnerships, the typical investment term is ten years. For alternative investments that permit redemptions, such redemptions are generally made quarterly and require a 90-day notice. The company is generally unable to determine the final redemption date and amount until the request is processed by the investment fund and therefore categorizes such alternative investments as Level 3 assets. In 2011, the asset allocation policy for certain plans was changed, and on a consolidated basis, this change had no impact on overall trust assets.

At December 31, 2011, and 2010, the defined benefit pension and VEBA trusts did not hold any Northrop Grumman common stock.

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The following table reflects estimated future benefit payments, based upon the same assumptions used to measure the benefit obligation, and includes expected future employee service, as of December 31, 2011:

<i>\$ in millions</i>	Pension Plans	Medical and Life Plans
Year Ending December 31		
2012	\$ 1,179	\$ 148
2013	1,243	153
2014	1,317	157
2015	1,383	161
2016	1,443	164
2017 through 2021	8,147	845

In 2012, the company expects to contribute the required minimum funding level of approximately \$65 million to its pension plans and approximately \$120 million to its other post-retirement benefit plans with no expected additional voluntary pension contributions. During the years ended December 31, 2011 and 2010, the company made voluntary pension contributions of \$1 billion and \$728 million, respectively.

**17. STOCK COMPENSATION PLANS AND OTHER COMPENSATION ARRANGEMENTS****Stock Compensation Plans**

At December 31, 2011, Northrop Grumman had stock-based compensation awards outstanding under the following plans: the 2001 Long-Term Incentive Stock Plan (2001 Plan) and the 2011 Long-Term Incentive Stock Plan (2011 Plan), both applicable to employees, and the 1993 Stock Plan for Non-Employee Directors (1993 SPND) and 1995 Stock Plan for Non-Employee Directors (1995 SPND) as amended. In addition, as a result of prior acquisitions there are other stock-based compensation awards outstanding. All of these plans were approved by the company's shareholders. The company has historically issued new shares to satisfy award grants.

*Employee Plans* – On May 18, 2011, the shareholders of the company approved the company's new 2011 Plan, which replaced the expired 2001 Plan. The 2011 Plan permit grants to key employees of three general types of stock incentive awards: stock options, stock appreciation rights (SARs), and stock awards. Each stock option grant is made with an exercise price either at the closing price of the stock on the date of grant (market options) or at a premium over the closing price of the stock on the date of grant (premium options). Outstanding stock options granted prior to 2008 generally vest in 25 percent increments over four years from the grant date, and grants outstanding expire ten years after the grant date. Stock options granted after January 1, 2008 vest in 33 percent increments over three years from the grant date and grants outstanding expire seven years after the grant date. No SARs have been granted under either the plans. Stock awards, in the form of restricted performance stock rights and restricted stock rights, are granted to key employees without payment to the company. The 2011 Plan also provides equity-based award grants to non-employee directors.

Under the 2011 Plan, the company is authorized to issue or transfer shares of common stock pursuant to any of the types of awards mentioned above. The 2011 Plan authorized 39.1 million new shares plus 6.9 million shares from the 2001 LTISP that were previously authorized and available to be issued at the date the 2001 Plan expired. Under the terms of the 2011 Plan, in the event that outstanding awards under the 2001 Plan expire or terminate without being exercised or paid, as the case may be, such shares (the "Forfeited Shares") will become available for award under the 2011 Plan.

Recipients of restricted performance stock rights earn shares of stock, based on financial metrics determined by the board of directors in accordance with the plan. For grants prior to 2010, if the objectives have not been met at the end of the applicable performance period, up to 100 percent of the original grant for members of the Corporate

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Policy Council (consisting of the CEO and certain other leadership positions) and up to 70 percent of the original grant for all other recipients will be forfeited. In 2010 and 2011, all recipients could forfeit up to 100 percent of the original grant, and all recipients could earn up to 200 percent of the original grant.

Restricted performance stock rights and restricted stock rights issued under either plan generally vest after three or four years. Termination of employment can result in forfeiture of some or all of the benefits extended. Shares issued under the 2011 Plan other than for stock options, stock appreciation rights and the Forfeited Shares will be counted against the 2011 Plan's aggregate share limit as 4.5 shares for every one share actually issued in connection with the award; any shares issued for stock options, stock appreciation rights and the Forfeited Shares will be counted against the remaining shares on a one for one basis.

As of December 31, 2011, 46 million shares are available for grant under the 2011 Plan.

*Non-Employee Plans* – Under the 1993 SPND, at least half of the retainer fee earned by each director must be deferred into a stock unit account (Automatic Stock Units). Effective January 1, 2010, the amended SPND provides that the Automatic Stock Units be awarded at the conclusion of board service or as specified by the director. If a director has less than 5 years of service, the stock units are awarded at the conclusion of board service. In addition, directors may defer payment of all or part of the remaining retainer fee and other annual committee fees, which are placed in a stock unit account (Elective Stock Units). The Elective Stock Units are awarded at the conclusion of board service or as specified by the director, regardless of years of service. Directors are credited with dividend equivalents in connection with the stock units until the shares are awarded. The 1995 SPND provided for annual stock option grants, and effective June 1, 2005, no new grants have been issued from this plan. Each grant of stock options under the 1995 SPND was made at the closing market price on the date of the grant, was immediately exercisable, and expires ten years after the grant date. The 1995 SPND was amended in May 2007 to permit payment of the stock unit portion of the retainer fee described above. The director plans reached their existing share limits during second quarter of 2011. Since all directors are eligible to receive awards under the 2011 LTISP, shares from this plan are available for future director awards following the same share counting limits as described for the employee plans.

*Shipbuilding Spin-off Adjustments* – As a result of the spin-off of Shipbuilding described in Note 6, effective March 31, 2011, all outstanding stock-based compensation awards related to HII employees and retirees were assumed by HII. Also effective with the spin-off, the share amounts for all remaining Northrop Grumman outstanding stock options and stock awards, and the strike price for stock options were adjusted to maintain the aggregate intrinsic value of the grants at the date of the spin-off pursuant to the terms of the company's applicable stock-based compensation plans. Taking into account the change in the value of the company's common stock as a result of the distribution of the HII shares to the company's shareholders, the conversion ratio for the remaining stock options and stock awards was 1.0938. For stock options, the net effect of these adjustments resulted in an increase to the stock options outstanding due to the limited number of stock options applicable to and assumed by HII for Shipbuilding employees. For stock awards, the net effect was a decrease in stock awards outstanding as the number of shares assumed by HII for Shipbuilding employees exceeded the impact of the adjustment to the remaining Northrop Grumman employees. The Shipbuilding spin-off adjustments are reflected in the stock option and stock award tables below.

### **Compensation Expense**

Total stock-based compensation for the years ended December 31, 2011, 2010, and 2009, was \$139 million, \$134 million, and \$101 million, respectively, of which \$14 million, \$27 million, and \$20 million related to stock options and \$125 million, \$107 million, and \$81 million, related to stock awards, respectively. Tax benefits recognized in the consolidated statements of operations for stock-based compensation during the years ended December 31, 2011, 2010, and 2009, were \$55 million, \$53 million, and \$40 million, respectively. In addition, the company realized tax benefits of \$18 million from the exercise of stock options and \$37 million from the issuance of stock awards in 2011. As a result of the spin-off of HII described in Note 6, of the total stock-based compensation for the years ended December 31, 2011, 2010, and 2009, amounts recorded in discontinued operations are \$3 million, \$16 million, and \$11 million, respectively.

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At December 31, 2011, there was \$144 million of unrecognized compensation expense related to unvested awards granted under the company's stock-based compensation plans, of which \$14 million relates to stock options and \$130 million relates to stock awards. These amounts are expected to be charged to expense over a weighted-average period of 1.4 years.

**Stock Options**

The fair value of each of the company's stock option awards is estimated on the date of grant using a Black-Scholes option-pricing model that uses the assumptions noted in the table below. Expected volatility is based on an average of (1) historical volatility of the company's stock and (2) implied volatility from traded options on the company's stock. The risk-free rate for periods within the contractual life of the stock option award is based on the yield curve of a zero-coupon U.S. Treasury bond on the date the award is granted with a maturity equal to the expected term of the award. The company uses historical data to estimate future forfeitures. The expected term of awards granted is derived from historical experience under the company's stock-based compensation plans and represents the period of time that awards granted are expected to be outstanding. The fair value of the company's stock option awards is expensed on a straight-line basis over the vesting period of the options, which is generally three to four years.

The significant weighted-average assumptions relating to the valuation of the company's stock options for the years ended December 31, 2011, 2010, and 2009, were as follows:

	2011	2010	2009
Dividend yield	2.8%	2.9%	3.6%
Volatility rate	25%	25%	25%
Risk-free interest rate	2.3%	2.2%	1.7%
Expected option life (years)	6	6	5-6

The company generally grants stock options exclusively to executives, and the expected term of six years is based on these employees' exercise behavior. In 2009, the company granted options to non-executives and assigned an expected term of five years for valuing these options. The company believes that this stratification of expected terms best represents future expected exercise behavior between the two employee groups.

Using the Black-Scholes option pricing model, the weighted-average grant date fair value of stock options granted during the years ended December 31, 2011, 2010, and 2009, was \$12, \$11, and \$7, per share, respectively.

Stock option activity for the year ended December 31, 2011, was as follows:

	Shares under Option (in thousands)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term	Aggregate Intrinsic Value (\$ in millions)
Outstanding at January 1, 2011	13,221	\$ 55	3.8 years	\$ 149
Granted	848	63		
Exercised	(2,384)	44		
Canceled and forfeited	(91)	55		
Shipbuilding spin-off adjustments	150	59		
<b>Outstanding at December 31, 2011</b>	<b>11,744</b>	<b>\$ 53</b>	<b>3.4 years</b>	<b>\$ 93</b>
Vested and expected to vest in the future at December 31, 2011	11,716	\$ 53	3.4 years	\$ 93
Exercisable at December 31, 2011	8,974	\$ 53	2.8 years	\$ 79

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The total intrinsic value of options exercised during the years ended December 31, 2011, 2010, and 2009, was \$46 million, \$42 million, and \$11 million, respectively. Intrinsic value is measured using the fair market value at the date of exercise (for options exercised) or at December 31, 2011 (for outstanding options), less the applicable exercise price.

**Stock Awards**

Compensation expense for stock awards is measured at the grant date based on fair value and recognized over the vesting period, generally three years. The fair value of stock awards and performance stock awards is determined based on the closing market price of the company's common stock on the grant date. The fair value of market-based stock awards is determined at the grant date using a Monte Carlo simulation model. For purposes of measuring compensation expense for performance awards, the number of shares ultimately expected to vest is estimated at each reporting date based on management's expectations regarding the relevant performance criteria.

Stock award activity for the years ended December 31, 2011, 2010, and 2009, is presented in the table below. Vested awards include stock awards fully vested during the year and net adjustments to reflect the final performance measure for issued shares.

	<b>Stock Awards (in thousands)</b>	<b>Weighted- Average Grant Date Fair Value</b>	<b>Weighted- Average Remaining Contractual Term</b>
Outstanding at January 1, 2009	3,276	\$ 75	1.4 years
Granted	2,356	45	
Vested	(1,645)	71	
Forfeited	(329)	66	
Outstanding at December 31, 2009	3,658	\$ 58	1.6 years
Granted	2,317	60	
Vested	(1,319)	79	
Forfeited	(356)	56	
Outstanding at December 31, 2010	4,300	\$ 53	1.5 years
Granted	1,748	63	
Vested	(1,824)	42	
Forfeited	(350)	50	
Shipbuilding spin-off adjustments	(252)	47	
<b>Outstanding at December 31, 2011</b>	<b>3,622</b>	<b>\$ 58</b>	<b>1.6 years</b>

The company issued 1.4 million, 1.3 million, and 2.5 million shares to employees in settlement of prior year stock awards that were fully vested, which had total fair values at issuance of \$87 million, \$76 million, and \$111 million and grant date fair values of \$101 million, \$91 million, and \$161 million during the years ended December 31, 2011, 2010, and 2009, respectively. The differences between the fair values at issuance and the grant date fair values reflect the effects of the performance adjustments and changes in the fair market value of the company's common stock.

In 2012, the company expects to issue to employees 2.8 million shares of common stock from the 2009 stock award grant that vested as of December 31, 2011, with a grant date fair value of \$115 million. The ultimate amount of shares to be paid out is subject to approval by the Compensation Committee of the Board of Directors and may vary from this estimate.

**Cash Performance Units**

Cash performance units are cash units, which are paid in cash based on the achievement of long-term financial goals at the end of a three-year period. If objectives are not met at the end of the applicable performance period, the entire grant may be forfeited. However if objectives are exceeded, up to 200 percent of the original grant may

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ultimately be paid out. Each unit has an initial value equal to the company's stock price on the date of grant. For purposes of measuring compensation expense, the amount ultimately expected to be paid out is estimated at each reporting date based on management's expectations regarding the applicable performance criteria. At December 31, 2011, there was \$133 million of unrecognized compensation expense related to cash performance units.

**18. UNAUDITED SELECTED QUARTERLY DATA**

Unaudited quarterly financial results are set forth in the following tables. It is the company's long-standing practice to establish actual interim closing dates using a "fiscal" calendar, which requires the businesses to close their books on a Friday, in order to normalize the potentially disruptive effects of quarterly close on business processes. The effects of this practice only exist within a reporting year.

**2011**

*\$ in millions, except per share amounts*

	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
Sales and service revenues	\$ 6,734	\$ 6,560	\$ 6,612	\$ 6,506
Operating income	811	841	825	799
Earnings from continuing operations	496	520	520	550
Net earnings	530	520	520	548
Basic earnings per share from continuing operations	1.70	1.84	1.89	2.13
Basic earnings per share	1.82	1.84	1.89	2.12
Diluted earnings per share from continuing operations	1.67	1.81	1.86	2.09
Diluted earnings per share	1.79	1.81	1.86	2.09
Weighted-average common shares outstanding, in millions	291.8	282.6	274.9	258.2
Weighted-average diluted shares outstanding, in millions	296.9	287.2	279.3	262.7

*Significant 2011 Fourth Quarter Events* – In the fourth quarter of 2011, the company made a \$500 million contribution to the company's pension plans. Additionally, the company repurchased 11.8 million shares of common stock for \$649 million.

**2010**

*\$ in millions, except per share amounts*

	<b>1st Qtr</b>	<b>2nd Qtr</b>	<b>3rd Qtr</b>	<b>4th Qtr</b>
Sales and service revenues	\$ 6,914	\$ 7,255	\$ 7,071	\$ 6,903
Operating income	680	749	723	675
Earnings from continuing operations	410	740	448	306
Net earnings	469	711	497	376
Basic earnings per share from continuing operations	1.36	2.47	1.53	1.05
Basic earnings per share	1.55	2.37	1.69	1.29
Diluted earnings per share from continuing operations	1.34	2.44	1.51	1.03
Diluted earnings per share	1.53	2.34	1.67	1.27
Weighted-average common shares outstanding, in millions	302.5	299.6	293.5	291.8
Weighted-average diluted shares outstanding, in millions	306.1	303.8	297.6	296.9

*Significant 2010 Fourth Quarter Events* – In the fourth quarter of 2010, the company recorded a pre-tax charge of \$229 million to non-operating expense related to the redemption of outstanding debt and made a \$360 million contribution to the company's pension plans. Additionally, the company repurchased 1.9 million shares of common stock for \$118 million.

**NORTHROP GRUMMAN CORPORATION**

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

No information is required in response to this item.

**Item 9A. Controls and Procedures**

**Relocation of Corporate Office**

During the year ended December 31, 2011, we relocated our corporate office in Los Angeles, California and corporate employees in Rosslyn, Virginia to our new corporate office in Falls Church, Virginia. These relocations included approximately one-third of the employees from the former California corporate office and most of the employees at the Rosslyn location. The Falls Church corporate office includes substantially all of our senior corporate leadership team. This relocation did not affect our accounting policies and procedures or underlying processes for the preparation of financial statements. We do not believe that this relocation had a material effect on our internal controls over financial reporting.

**Disclosure Controls and Procedures**

Our principal executive officer (Chairman, Chief Executive Officer and President) and principal financial officer (Corporate Vice President and Chief Financial Officer) have evaluated the company's disclosure controls and procedures as of December 31, 2011, and have concluded that these controls and procedures are effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Securities Exchange Act of 1934 (15 USC § 78a et seq) is recorded, processed, summarized, and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. These disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit is accumulated and communicated to management, including the principal executive officer and the principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

**Changes in Internal Control Over Financial Reporting**

During the fourth quarter of 2011, no change occurred in the company's internal control over financial reporting that materially affected, or is likely to materially affect, the company's internal control over financial reporting.

**Item 9B. Other Information**

No information is required in response to this item.



## MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The management of Northrop Grumman Corporation (the company) prepared and is responsible for the consolidated financial statements and all related financial information contained in this Annual Report. This responsibility includes establishing and maintaining effective internal control over financial reporting. The company's internal control over financial reporting was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

To comply with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002, the company designed and implemented a structured and comprehensive assessment process to evaluate its internal control over financial reporting across the enterprise. The assessment of the effectiveness of the company's internal control over financial reporting was based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance and may not prevent or detect misstatements. Management regularly monitors its internal control over financial reporting, and actions are taken to correct any deficiencies as they are identified. Based on its assessment, management has concluded that the company's internal control over financial reporting is effective as of December 31, 2011.

Deloitte & Touche LLP issued an attestation report dated February 7, 2012, concerning the company's internal control over financial reporting, which is contained in this Annual Report. The company's consolidated financial statements as of and for the year ended December 31, 2011, have been audited by the independent registered public accounting firm of Deloitte & Touche LLP in accordance with the standards of the Public Company Accounting Oversight Board (United States).

/s/ Wesley G. Bush  
Chairman, Chief Executive Officer and President

/s/ James F. Palmer  
Corporate Vice President and Chief Financial Officer  
February 7, 2012

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Shareholders of  
Northrop Grumman Corporation  
Falls Church, Virginia

We have audited the internal control over financial reporting of Northrop Grumman Corporation and subsidiaries (the “Company”) as of December 31, 2011, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on the criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2011 of the Company and our report dated February 7, 2012 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP  
McLean, Virginia  
February 7, 2012

## NORTHROP GRUMMAN CORPORATION

## PART III

**Item 10. Directors, Executive Officers, and Corporate Governance****Directors**

Information about our Directors will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Stockholders, to be filed with the Securities and Exchange Commission within 120 days after the end of our fiscal year.

**Executive Officers**

Our executive officers as of February 7, 2012, are listed below, along with their ages on that date, positions and offices with the company, and principal occupations and employment during the past five years.

<u>Name</u>	<u>Age</u>	<u>Office Held</u>	<u>Since</u>	<u>Prior Business Experience (Last Five Years)</u>
Wesley G. Bush	50	Chairman, Chief Executive Officer and President	2010	President and Chief Operating Officer (2007-2009); Prior to March 2007, President and Chief Financial Officer (2006-2007); Corporate Vice President and Chief Financial Officer (2005-2006)
M. Sidney Ashworth	60	Corporate Vice President, Government Relations	2010	Vice President of Washington Operations, GE Aviation (2010); Prior to March 2010, Principal, the Ashworth Group (2009-2010); Professional Staff Member, U.S. Senate Committee on Appropriations (1995-2009)
Kenneth L. Bedingfield*	39	Corporate Vice President, Finance	2011	Partner and National Client Leader for Aerospace & Defense, KPMG LLP (2010-2011); Prior to December 2010, Partner KPMG LLP (2005-2010)
Sheila C. Cheston	53	Corporate Vice President and General Counsel	2010	Executive Vice President and Director, BAE Systems, Inc. (2009 -2010); Prior to September 2009, Senior Vice President, General Counsel, Secretary and Director, BAE Systems, Inc. (2002-2009)
Gary W. Ervin	54	Corporate Vice President and President, Aerospace Systems Sector	2009	Corporate Vice President and President, Integrated Systems Sector (2008); Prior to 2008, Corporate Vice President (2007-2008); Vice President, Western Region, Integrated Systems Sector (2005-2007)
Gloria A. Flach	53	Corporate Vice President and President, Northrop Grumman Enterprise Shared Services	2010	Sector Vice President and General Manager, Targeting Systems Division, Electronic Systems (ES) Sector (2010); Prior to 2010, Sector Vice President and General Manager of Engineering, Manufacturing and Logistics, ES Sector (2009); Sector Vice President and General Manager of Engineering & Logistics, ES Sector (2007-2008); Sector Vice President and Chief Information Officer, ES Sector (2004-2006)
Darryl M. Fraser	53	Corporate Vice President, Communications	2008	Sector Vice President of Business Development and Strategic Initiatives, Mission Systems Sector (2007-March 2008); Prior to May 2007, Sector Vice President, Strategic Initiatives, Mission Systems Sector (2007); Vice President, Washington Operations, Mission Systems and Space Technology Sectors (2005-2007)

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<b><u>Name</u></b>	<b><u>Age</u></b>	<b><u>Office Held</u></b>	<b><u>Since</u></b>	<b><u>Prior Business Experience (Last Five Years)</u></b>
Kenneth N. Heintz	65	Corporate Vice President, Controller and Chief Accounting Officer	2005	
Alexis C. Livanos	63	Corporate Vice President and Chief Technology Officer	2009	Corporate Vice President and President, Space Technology Sector (2005-2008)
Linda A. Mills	62	Corporate Vice President and President, Information Systems Sector	2009	Corporate Vice President and President, Information Technology Sector (2008); Prior to 2008, President of the Civilian Agencies business group, Information Technology Sector (2007-2008); Vice President for Operations and Processes, Information Technology Sector (2005-2007)
James F. Palmer	62	Corporate Vice President and Chief Financial Officer	2007	Executive Vice President and Chief Financial Officer, Visteon Corporation (2004-2007)
Denise M. Peppard	55	Corporate Vice President and Chief Human Resources Officer	2011	Vice President and Chief Human Resources, Computer Sciences Corporation (2010-2011); Senior Vice President of Human Resources, Wyeth Pharmaceuticals (2001-2010)
James F. Pitts	60	Corporate Vice President and President, Electronic Systems Sector	2005	
Thomas E. Vice	49	Corporate Vice President and President, Technical Services Sector	2010	Sector Vice President and General Manager, Battle Management and Engagement Systems Division, Aerospace Systems Sector (2008-2010); Prior to 2008, Vice President, Airborne Early Warning and Battle Management Command and Control – Navy Programs, Integrated Systems Sector (2006-2007); Sector Vice President of Business Development, Integrated Systems Sector (2004-2006)

\* As previously announced, Kenneth N. Heintz will retire from his position as Corporate Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer) following the filing of this Form 10-K. Effective upon Mr. Heintz's retirement, Kenneth L. Bedingfield, Corporate Vice President, will become our Corporate Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer).

**Audit Committee Financial Expert**

The information as to the Audit Committee and the Audit Committee Financial Expert will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Stockholders to be filed within 120 days after the end of the company's fiscal year.

## **NORTHROP GRUMMAN CORPORATION**

### **Code of Ethics**

We have adopted Standards of Business Conduct for all of our employees, including the principal executive officer, principal financial officer and principal accounting officer. The Standards of Business Conduct can be found on our internet web site at [www.northropgrumman.com](http://www.northropgrumman.com) under “Investor Relations – Corporate Governance – Overview.” A copy of the Standards of Business Conduct is available to any stockholder who requests it by writing to: Northrop Grumman Corporation, c/o Office of the Secretary, 2980 Fairview Park Drive, Falls Church, VA 22042.

The website and information contained on it or incorporated in it are not intended to be incorporated in this report on Form 10-K or other filings with the Securities Exchange Commission.

### **Other Disclosures**

Other disclosures required by this Item will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Stockholders to be filed within 120 days after the end of the company’s fiscal year.

### **Item 11. Executive Compensation**

Information concerning Executive Compensation, including information concerning Compensation Committed Interlocks and Insider Participation and Compensation Committee Report, will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Stockholders to be filed within 120 days after the end of the company’s fiscal year.

### **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information as to Securities Authorized for Issuance Under Equity Compensation Plans and Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Stockholders to be filed within 120 days after the end of the company’s fiscal year.

### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information as to Certain Relationships and Related Transactions, and Director Independence will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Stockholders to be filed within 120 days after the end of the company’s fiscal year.

### **Item 14. Principal Accountant Fees and Services**

The information as to principal accountant fees and services will be incorporated herein by reference to the Proxy Statement for the 2012 Annual Meeting of Shareholders to be filed within 120 days after the end of the company’s fiscal year.

**NORTHROP GRUMMAN CORPORATION**

**PART IV**

**Item 15. Exhibits and Financial Statement Schedules**

(a) 1. Report of Independent Registered Public Accounting Firm

Financial Statements

- Consolidated Statements of Operations
- Consolidated Statements of Financial Position
- Consolidated Statements of Cash Flows
- Consolidated Statements of Changes in Shareholders' Equity
- Notes to Consolidated Financial Statements

2. Financial Statement Schedules

All schedules have been omitted because they are not applicable, not required, or the information has been otherwise supplied in the financial statements or notes to the financial statements.

3. Exhibits

- 2(a) Agreement and Plan of Merger among Titan II, Inc. (formerly Northrop Grumman Corporation), Northrop Grumman Corporation (formerly New P, Inc.) and Titan Merger Sub Inc., dated March 29, 2011 (incorporated by reference to Exhibit 10.1 to Form 8-K filed April 4, 2011)
- 2(b) Separation and Distribution Agreement dated as of March 29, 2011, among Titan II, Inc. (formerly Northrop Grumman Corporation), Northrop Grumman Corporation (formerly New P, Inc.), Huntington Ingalls Industries, Inc., Northrop Grumman Shipbuilding, Inc. and Northrop Grumman Systems Corporation (incorporated by reference to Exhibit 10.2 to Form 8-K filed April 4, 2011)
- 3(a) Restated Certificate of Incorporation of Northrop Grumman Corporation dated March 30, 2011 (incorporated by reference to Exhibit 3.1 to Form 10-Q for the quarter ended June 30, 2011, filed July 27, 2011)
- 3(b) Restated Bylaws of Northrop Grumman Corporation (as restated March 30, 2011) (incorporated by reference to Exhibit 3.1 to Form 8-K filed May 23, 2011)
- 4(a) Registration Rights Agreement dated as of January 23, 2001, by and among Northrop Grumman Corporation (now Northrop Grumman Systems Corporation), NNG, Inc. (now Northrop Grumman Corporation) and Unitrin, Inc. (incorporated by reference to Exhibit(d)(6) to Amendment No. 4 to Schedule TO filed January 31, 2001)
- 4(b) Indenture dated as of October 15, 1994, between Northrop Grumman Corporation (now Northrop Grumman Systems Corporation) and The Chase Manhattan Bank (National Association), Trustee (incorporated by reference to Exhibit 4.1 to Form 8-K filed October 25, 1994)
- 4(c) First Supplemental Indenture dated as of March 30, 2011 by and among Northrop Grumman Systems Corporation, The Bank of New York Mellon (successor trustee to JPMorgan Chase Bank and The Chase Manhattan Bank, N.A.), Titan II, Inc. (formerly known as Northrop Grumman Corporation), and Titan Holdings II, L.P., to Indenture dated as of October 15, 1994, between Northrop Grumman Corporation (now Northrop Grumman Systems Corporation) and The Chase Manhattan Bank, N.A., Trustee (incorporated by reference to Exhibit 4.1 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(d) Second Supplemental Indenture dated as of March 30, 2011 by and among Northrop Grumman Systems Corporation, The Bank of New York Mellon (successor trustee to JPMorgan Chase Bank and The Chase Manhattan Bank, N.A.), Titan Holdings II, L.P., and

**NORTHROP GRUMMAN CORPORATION**

- Northrop Grumman Corporation (formerly known as New P, Inc.), to Indenture dated as of October 15, 1994, between Northrop Grumman Corporation (now Northrop Grumman Systems Corporation) and The Chase Manhattan Bank, N.A., Trustee (incorporated by reference to Exhibit 4.2 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(e) Form of Officers' Certificate (without exhibits) establishing the terms of Northrop Grumman Corporation's (now Northrop Grumman Systems Corporation's) 7.75 percent Debentures due 2016 and 7.875 percent Debentures due 2026 (incorporated by reference to Exhibit 4-3 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(f) Form of Northrop Grumman Corporation's (now Northrop Grumman Systems Corporation's) 7.75 percent Debentures due 2016 (incorporated by reference to Exhibit 4-5 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(g) Form of Northrop Grumman Corporation's (now Northrop Grumman Systems Corporation's) 7.875 percent Debentures due 2026 (incorporated by reference to Exhibit 4-6 to Form S-4 Registration Statement No. 333-02653 filed April 19, 1996)
- 4(h) Form of Officers' Certificate establishing the terms of Northrop Grumman Corporation's (now Northrop Grumman Systems Corporation's) 7.125 percent Notes due 2011 and 7.75 percent Debentures due 2031 (incorporated by reference to Exhibit 10.9 to Form 8-K filed April 17, 2001)
- 4(i) Indenture dated as of April 13, 1998, between Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Bank of New York, as trustee, under which its 6.75 percent Senior Debentures due 2018 were issued (incorporated by reference to Exhibit 4.1 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 1998, filed June 15, 1998)
- 4(j) Supplemental Indenture with respect to Indenture dated April 13, 1998, dated as of April 3, 2001, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.5 to Form 10-Q for the quarter ended March 31, 2001, filed May 10, 2001)
- 4(k) Supplemental Indenture with respect to Indenture dated April 13, 1998, dated as of December 20, 2002, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4(q) to Form 10-K for the year ended December 31, 2002, filed March 24, 2003)
- 4(l) Third Supplemental Indenture dated as of March 30, 2011 by and among Northrop Grumman Systems Corporation (successor-in-interest to Litton Industries, Inc.), The Bank of New York Mellon (formerly known as The Bank of New York) as trustee, Titan II, Inc. (formerly known as Northrop Grumman Corporation), and Titan Holdings II, L.P., to Indenture dated April 13, 1998, between Litton Industries, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.3 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(m) Fourth Supplemental Indenture dated as of March 30, 2011 by and among Northrop Grumman Systems Corporation (successor-in-interest to Litton Industries, Inc.), The Bank of New York Mellon (formerly known as The Bank of New York) as trustee, Titan Holdings II, L.P., and Northrop Grumman Corporation (formerly known as New P., Inc.), to Indenture dated April 13, 1998, between Litton Industries, Inc. and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.4 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)

**NORTHROP GRUMMAN CORPORATION**

- 4(n) Senior Indenture dated as of December 15, 1991, between Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Bank of New York, as trustee, under which its 7.75 percent and 6.98 percent debentures due 2026 and 2036 were issued, and specimens of such debentures (incorporated by reference to Exhibit 4.1 to the Form 10-Q of Litton Industries, Inc. for the quarter ended April 30, 1996, filed June 11, 1996)
- 4(o) Supplemental Indenture with respect to Indenture dated December 15, 1991, dated as of April 3, 2001, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.7 to Form 10-Q for the quarter ended March 31, 2001, filed May 10, 2001)
- 4(p) Supplemental Indenture with respect to Indenture dated December 15, 1991, dated as of December 20, 2002, among Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation), Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4(t) to Form 10-K for the year ended December 31, 2002, filed March 24, 2003)
- 4(q) Third Supplemental Indenture dated as of March 30, 2011 by and among Northrop Grumman Systems Corporation (successor-in-interest to Litton Industries, Inc.), The Bank of New York Mellon (formerly known as The Bank of New York), as trustee, Titan II, Inc. (formerly known as Northrop Grumman Corporation), and Titan Holdings II, L.P., to Senior Indenture dated December 15, 1991, among Litton Industries, Inc., Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.5 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(r) Fourth Supplemental Indenture dated as of March 30, 2011 by and among Northrop Grumman Systems Corporation (successor-in-interest to Litton Industries, Inc.), The Bank of New York Mellon (formerly known as The Bank of New York) as trustee, Titan Holdings II, L.P., and Northrop Grumman Corporation (formerly known as New P, Inc.), to Senior Indenture dated December 15, 1991, among Litton Industries, Inc., Northrop Grumman Corporation, Northrop Grumman Systems Corporation and The Bank of New York, as trustee (incorporated by reference to Exhibit 4.6 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(s) Indenture between TRW Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and Mellon Bank, N.A., as trustee, dated as of May 1, 1986 (incorporated by reference to Exhibit 2 to the Form 8-A Registration Statement of TRW Inc. dated July 3, 1986)
- 4(t) First Supplemental Indenture between TRW Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and Mellon Bank, N.A., as trustee, dated as of August 24, 1989 (incorporated by reference to Exhibit 4(b) to Form S-3 Registration Statement No. 33-30350 of TRW Inc.)
- 4(u) Fifth Supplemental Indenture between TRW Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) and The Chase Manhattan Bank, as successor trustee, dated as of June 2, 1999 (incorporated by reference to Exhibit 4(f) to Form S-4 Registration Statement No. 333-83227 of TRW Inc. filed July 20, 1999)



**NORTHROP GRUMMAN CORPORATION**

- 4(v) Ninth Supplemental Indenture dated as of December 31, 2009 among Northrop Grumman Space & Mission Systems Corp. (predecessor-in-interest to Northrop Grumman Systems Corporation); The Bank of New York Mellon, as successor trustee; Northrop Grumman Corporation; and Northrop Grumman Systems Corporation (incorporated by reference to Exhibit 4(p) to Form 10-K for the year ended December 31, 2009, filed February 9, 2010)
- 4(w) Tenth Supplemental Indenture dated as of March 30, 2011, by and among Northrop Grumman Systems Corporation (successor-in-interest to Northrop Grumman Space & Mission Systems Corp. and TRW, Inc.), The Bank of New York Mellon, as successor trustee to JPMorgan Chase Bank and to Mellon Bank, N.A., Titan II Inc. (formerly known as Northrop Grumman Corporation), and Titan Holdings II, L.P., to Indenture between TRW Inc. and Mellon Bank, N.A., as trustee, dated as of May 1, 1986 (incorporated by reference to Exhibit 4.7 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(x) Eleventh Supplemental Indenture dated as of March 30, 2011, by and among Northrop Grumman Systems Corporation (successor-in-interest to Northrop Grumman Space & Mission Systems Corp. and TRW Inc.), The Bank of New York Mellon, as successor trustee to JPMorgan Chase Bank and to Mellon Bank, N.A., Titan Holdings II, L.P., and Northrop Grumman Corporation (formerly known as New P, Inc.) to Indenture between TRW Inc. and Mellon Bank, N.A., as trustee, dated as of May 1, 1986 (incorporated by reference to Exhibit 4.8 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 4(y) Indenture dated as of November 21, 2001, between Northrop Grumman Corporation and JPMorgan Chase Bank, as trustee (incorporated by reference to Exhibit 4.1 to Form 8-K filed November 21, 2001)
- 4(z) First Supplemental Indenture dated as of July 30, 2009, between Northrop Grumman Corporation and The Bank of New York Mellon, as successor trustee, to Indenture dated as of November 21, 2001 (incorporated by reference to Exhibit 4(a) to Form 8-K filed July 30, 2009)
- 4(aa) Form of Northrop Grumman Corporation's 3.70 percent Senior Note due 2014 (incorporated by reference to Exhibit 4(b) to Form 8-K filed July 30, 2009)
- 4(bb) Form of Northrop Grumman Corporation's 5.05 percent Senior Note due 2019 (incorporated by reference to Exhibit 4(c) to Form 8-K filed July 30, 2009)
- 4(cc) Second Supplemental Indenture dated as of November 8, 2010, between Northrop Grumman Corporation and The Bank of New York Mellon, as successor trustee, to Indenture dated as of November 21, 2001 (incorporated by reference to Exhibit 4(a) to Form 8-K filed November 8, 2010)
- 4(dd) Form of Northrop Grumman Corporation's 1.850% Senior Note due 2015 (incorporated by reference to Exhibit 4(a) to Form 8-K filed November 8, 2010)
- 4(ee) Form of Northrop Grumman Corporation's 3.500% Senior Note due 2021 (incorporated by reference to Exhibit 4(a) to Form 8-K filed November 8, 2010)
- 4(ff) Form of Northrop Grumman Corporation's 5.050% Senior Note due 2040 (incorporated by reference to Exhibit 4(a) to Form 8-K filed November 8, 2010)
- 4(gg) Third Supplemental Indenture dated as of March 30, 2011, by and among Titan II, Inc. (formerly known as Northrop Grumman Corporation), The Bank of New York Mellon, as successor trustee to JPMorgan Chase Bank, and Titan Holdings II, L.P., to Indenture dated as of November 21, 2001 between Northrop Grumman Corporation and JPMorgan Chase Bank, as trustee (incorporated by reference to Exhibit 4.9 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)

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- 4(hh) Fourth Supplemental Indenture dated as of March 30, 2011, by and among Titan Holdings II, L.P., The Bank of New York Mellon, as successor trustee to JPMorgan Chase Bank, and Northrop Grumman Corporation (formerly known as New P., Inc.), to Indenture dated as of November 21, 2001 between Northrop Grumman Corporation and JPMorgan Chase Bank, as trustee (incorporated by reference to Exhibit 4.10 to Form 10-Q for the quarter ended March 31, 2011, filed April 27, 2011)
- 10(a) Second Amended and Restated Credit Agreement dated as of September 8, 2011, among Northrop Grumman Corporation, as Borrower; Northrop Grumman Systems Corporation, as Guarantor; the Lenders party thereto; JPMorgan Chase Bank, N.A., as Administrative Agent, an Issuing Bank and a Swingline Lender; and Citibank, N.A., The Royal Bank of Scotland plc and Wells Fargo Bank, National Association, as Syndication Agents (incorporated by reference to Exhibit 10.1 to Form 8-K filed September 13, 2011)
- 10(b) 364-Day Credit Agreement dated as of September 8, 2011, among Northrop Grumman Corporation, as Borrower; Northrop Grumman Systems Corporation, as Guarantor; the Lenders party thereto; JPMorgan Chase Bank, N.A., as Administrative Agent; and Citibank, N.A., The Royal Bank of Scotland plc and Wells Fargo Bank, National Association, as Syndication Agents (incorporated by reference to Exhibit 10.2 to Form 8-K filed September 13, 2011)
- 10(c) Form of Amended and Restated Credit Agreement dated as of August 10, 2007, among Northrop Grumman Corporation, as Borrower; Northrop Grumman Systems Corporation and Northrop Grumman Space & Mission Systems Corp. (predecessor-in-interest to Northrop Grumman Systems Corporation), as Guarantors; the Lenders party thereto; JPMorgan Chase Bank, N.A., as Payment Agent, an Issuing Bank, Swingline Lender and Administrative Agent; Credit Suisse, as Administrative Agent; Citicorp USA, Inc., as Syndication Agent; Deutsche Bank Securities Inc. and The Royal Bank of Scotland PLC, as Documentation Agents; and BNP Paribas as Co-Documentation Agent (incorporated by reference to Exhibit 10.1 to Form 8-K filed August 13, 2007)
- 10(d) Form of Guarantee dated as of April 3, 2001, by Northrop Grumman Corporation of the indenture indebtedness issued by Litton Industries, Inc. (predecessor-in-interest to Northrop Grumman Systems Corporation) (incorporated by reference to Exhibit 10.10 to Form 8-K filed April 17, 2001)
- 10(e) Form of Guarantee dated as of April 3, 2001, by Northrop Grumman Corporation of Northrop Grumman Systems Corporation indenture indebtedness (incorporated by reference to Exhibit 10.11 to Form 8-K and filed April 17, 2001)
- 10(f) Form of Guarantee dated as of March 27, 2003, by Northrop Grumman Corporation, as Guarantor, in favor of JP Morgan Chase Bank, as trustee, of certain debt securities issued by the former Northrop Grumman Space & Mission Systems Corp. (predecessor-in-interest to Northrop Grumman Systems Corporation) (incorporated by reference to Exhibit 4.2 to Form 10-Q for the quarter ended March 31, 2003, filed May 14, 2003)
- +10(g) Consultant Contract dated June 28, 2010 between Ronald D. Sugar and Northrop Grumman Corporation (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2010, filed July 29, 2010)
- +10(h) Northrop Grumman Corporation 1993 Stock Plan for Non-Employee Directors (as Amended and Restated January 1, 2010) (incorporated by reference to Exhibit 10.1 to Form 10-Q for the quarter ended June 30, 2009, filed July 23, 2009)

**NORTHROP GRUMMAN CORPORATION**

- +10(i) Northrop Grumman 2001 Long-Term Incentive Stock Plan (As amended through December 19, 2007) (incorporated by reference to Exhibit A to the Company's Proxy Statement on Schedule 14A for the 2008 Annual Meeting of Shareholders filed April 21, 2008)
- (i) Form of Notice of Non-Qualified Grant of Stock Options and Option Agreement (incorporated by reference to Exhibit 10.5 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
  - (ii) Form of Agreement for 2005 Stock Options (officer) (incorporated by reference to Exhibit 10(d)(v) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)
  - (iii) Form of letter from Northrop Grumman Corporation regarding Stock Option Retirement Enhancement (incorporated by reference to Exhibit 10.2 to Form 8-K dated March 14, 2005 and filed March 15, 2005)
  - (iv) Form of Agreement for 2006 Stock Options (officer) (incorporated by reference to Exhibit 10(d)(viii) to Form 10-K for the year ended December 31, 2005, filed February 17, 2006)
  - (v) Form of Agreement for 2007 Stock Options (officers) (incorporated by reference to Exhibit 10(2)(ii) to Form 10-Q for the quarter ended March 31, 2007, filed April 24, 2007)
  - (vi) Terms and Conditions Applicable to Special 2007 Restricted Stock Rights Granted to James F. Palmer dated March 12, 2007, as amended (incorporated by reference to Exhibit 10(i)(xiii) to Form 10-K for the year ended December 31, 2007, filed February 20, 2008)
  - (vii) Form of Agreement for 2008 Stock Options (officer) (incorporated by reference to Exhibit 10(4)(i) to Form 10-Q for the quarter ended March 31, 2008, filed April 24, 2008)
  - (viii) Form of Agreement for 2009 Stock Options (incorporated by reference to Exhibit 10.2(i) to Form 10-Q for the quarter ended March 31, 2009, filed April 22, 2009)
  - (ix) Form of Agreement for 2009 Restricted Performance Stock Rights (incorporated by reference to Exhibit 10.2(ii) to Form 10-Q for the quarter ended March 31, 2009, filed April 22, 2009)
  - (x) Form of Agreement for 2010 Restricted Performance Stock Rights (incorporated by reference to Exhibit 10.2 to Form 10-Q for the quarter ended March 31, 2010, filed April 28, 2010)
  - (xi) Form of Agreement for 2010 Stock Options (incorporated by reference to Exhibit 10.3 to Form 10-Q for the quarter ended March 31, 2010, filed April 28, 2010)
  - (xii) Form of Agreement for 2010 Restricted Stock Rights (incorporated by reference to Exhibit 10.4 to Form 10-Q for the quarter ended March 31, 2010, filed April 28, 2010)
  - (xiii) Terms and Conditions Applicable to 2010 Restricted Stock Rights Granted to Sheila C. Cheston dated November 11, 2010
  - (xiv) Form of Agreement for 2011 Stock Options granted under the Northrop Grumman 2001 Long-Term Incentive Stock Plan (As amended through December 19, 2007) (incorporated by reference to Exhibit 10.1 of Form 8-K filed February 22, 2011)
  - (xv) Form of Agreement for 2011 Restricted Performance Stock Rights granted under the Northrop Grumman 2001 Long-Term Incentive Stock Plan (As amended through December 19, 2007) (incorporated by reference to Exhibit 10.2 of Form 8-K filed February 22, 2011)

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**NORTHROP GRUMMAN CORPORATION**

- (xvi) Form of Agreement for 2011 Restricted Stock Rights granted under the Northrop Grumman 2001 Long-Term Incentive Stock Plan (As amended through December 19, 2007) (incorporated by reference to Exhibit 10.3 of Form 8-K filed February 22, 2011)
- (xvii) Terms and Conditions Applicable to Special 2011 Restricted Stock Rights granted to Gary W. Ervin under the Northrop Grumman 2001 Long-Term Incentive Stock Plan (as amended through December 19, 2007) (incorporated by reference to Exhibit 10.4 of Form 8-K filed February 22, 2011)
- +10(j) Northrop Grumman 2011 Long-Term Incentive Stock Plan (incorporated by reference to Exhibit A to the Company's Proxy Statement on Schedule 14A for the 2011 Annual Meeting of Shareholders filed April 8, 2011)
  - (i) Form of Agreement for 2011 Restricted Stock Rights granted under the Northrop Grumman 2001 Long-Term Incentive Stock Plan (replaces Grant Certificate Specifying the Terms and Conditions Applicable to 2011 Restricted Stock Rights Granted Under the 2001 Long-Term Incentive Stock Plan filed as Exhibit 10.3 to Form 8-K filed February 22, 2011)
  - \*(ii) Summary of Non-Employee Director Award Terms Under the 2011 Long-Term Incentive Stock Plan effective December 21, 2011
- +\*10(k) Northrop Grumman Supplemental Plan 2 (Amended and Restated Effective as of January 1, 2012)
  - (i) Appendix A: Northrop Supplemental Retirement Income Program for Senior Executives (Amended and Restated Effective as of January 1, 2009) (incorporated by reference to Exhibit 10(i)(i) to Form 10-K for the year ended December 31, 2009, filed February 9, 2010)
  - (ii) Appendix B to the Northrop Grumman Supplemental Plan 2: ERISA Supplemental Program 2 (Amended and Restated Effective as of January 1, 2011) dated June 27, 2011 (incorporated by reference to Exhibit 10.9 to Form 10-Q for the quarter ended June 30, 2011, filed July 27, 2011)
  - \*(iii) Appendix F to the Northrop Grumman Supplemental Plan 2: CPC Supplemental Executive Retirement Program (Amended and Restated Effective as of January 1, 2012)
  - \*(iv) Appendix G to the Northrop Grumman Supplemental Plan 2: Officers Supplemental Executive Retirement Program (Amended and Restated Effective as of January 1, 2012)
- +\*10(l) Northrop Grumman ERISA Supplemental Plan (Amended and Restated Effective as of January 1, 2012)
- +\*10(m) Northrop Grumman Supplementary Retirement Income Plan (formerly TRW Supplementary Retirement Income Plan) (Amended and Restated Effective January 1, 2012)
- +\*10(n) Northrop Grumman Electronic Systems Executive Pension Plan (Amended and Restated Effective as of January 1, 2012)
- +10(o) Letter dated September 21, 2010 from Lewis W. Coleman, Chairman of the Board, regarding terms of the relocation arrangement for Wesley G. Bush, Chief Executive Officer and President, in connection with relocation of Company headquarters (incorporated by reference to Exhibit 10.1 to Form 8-K filed September 21, 2010)

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**NORTHROP GRUMMAN CORPORATION**

- +10(p) Severance Plan for Elected and Appointed Officers of Northrop Grumman Corporation As amended and restated effective August 1, 2010 (incorporated by reference to Exhibit 10(q) to Form 10-K for the year ended December 31, 2010, filed February 9, 2011)
- +10(q) Non-Employee Director Compensation Term Sheet, effective May 19, 2010 (incorporated by reference to Exhibit 10.2 to Form 10-Q for the quarter ended June 30, 2010, filed July 29, 2010)
- +10(r) Non-Employee Director Compensation Term Sheet, effective as of April 1, 2011 (replacing previously filed Exhibit 10.17 to Form 10-Q for the quarter ended June 30, 2011, filed July 27, 2011) (incorporated by reference to Exhibit 10.4 to Form 10-Q for the quarter ended September 30, 2011, filed October 26, 2011)
- +10(s) Form of Indemnification Agreement between Northrop Grumman Corporation and its directors and executive officers (incorporated by reference to Exhibit 10.39 to Form S-4 Registration Statement No. 333-83672 filed March 4, 2002)
- +\*10(t) Northrop Grumman Deferred Compensation Plan (Amended and Restated Effective as of January 1, 2012)
- +10(u) The 2002 Incentive Compensation Plan of Northrop Grumman Corporation, As Amended and Restated effective January 1, 2009 (incorporated by reference to Exhibit 10.6 to Form 10-Q for the quarter ended March 31, 2009, filed April 22, 2009)
- +10(v) Northrop Grumman 2006 Annual Incentive Plan and Incentive Compensation Plan (for Non-Section 162(m) Officers), as amended and restated effective January 1, 2009 (incorporated by reference to Exhibit 10.7 to Form 10-Q for the quarter ended March 31, 2009, filed April 22, 2009)
- +\*10(w) Northrop Grumman Savings Excess Plan (Amended and Restated Effective as of January 1, 2012)
- +\*10(x) Northrop Grumman Officers Retirement Account Contribution Plan (Amended and Restated Effective as of January 1, 2012)
- +10(y) Compensatory Arrangements of Certain Officers (Named Executive Officers) for 2011 (incorporated by reference to Item 5.02(e) of Form 8-K filed February 22, 2011)
- +10(z) Compensatory Arrangements of Certain Officers (incorporated by reference to Item 5.02(e) of Form 8-K dated May 17, 2011 and filed May 23, 2011)
- +10(aa) Offering letter dated February 1, 2007 from Northrop Grumman Corporation to James F. Palmer relating to position of Corporate Vice President and Chief Financial Officer (incorporated by reference to Exhibit 10(3) to Form 10-Q for the quarter ended March 31, 2007, filed April 24, 2007), as amended by Amendment to Letter Agreement between Northrop Grumman Corporation and James F. Palmer dated December 17, 2008 (incorporated by reference to Exhibit 10.3 to Form 8-K filed December 19, 2008)
- +10(bb) Northrop Grumman Supplemental Retirement Replacement Plan, as Restated, dated January 1, 2008 between Northrop Grumman Corporation and James F. Palmer (incorporated by reference to Exhibit 10.4 to Form 8-K filed December 19, 2008)
  - \* (i) First Amendment to the Northrop Grumman Supplemental Retirement Replacement Plan, dated October 25, 2011
- +10(cc) Northrop Grumman Corporation Special Officer Retiree Medical Plan (Amended and Restated Effective January 1, 2008) (incorporated by reference to Exhibit 10(2) to Form 10-Q for the quarter ended March 31, 2008, filed April 24, 2008)
- +10(dd) Executive Life Insurance Policy (incorporated by reference to Exhibit 10(gg) to Form 10-K for the year ended December 31, 2004, filed March 4, 2005)

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**NORTHROP GRUMMAN CORPORATION**

+10(cc)	Executive Accidental Death, Dismemberment and Plegia Insurance Policy Terms applicable to Executive Officers dated January 1, 2009 (incorporated by reference to Exhibit 10.3 to Form 10-Q for the quarter ended March 31, 2009, filed April 22, 2009)
+10(ff)	Executive Long-Term Disability Insurance Policy as amended by Amendment No. 2 dated June 19, 2008 and effective as of October 4, 2007 (incorporated by reference to Exhibit 10(2) to Form 10-Q for the quarter ended June 30, 2008, filed July 29, 2008)
+10(gg)	Executive Dental Insurance Policy Group Numbers 5134 and 5135 (incorporated by reference to Exhibit 10(m) to Form 10-K for the year ended December 31, 1995, filed February 22, 1996), as amended by action of the Compensation Committee of the Board of Directors of Northrop Grumman Corporation effective July 1, 2009 (incorporated by reference to Item 5.02(e) of Form 8-K filed May 26, 2009)
+10(hh)	Group Personal Excess Liability Policy (incorporated by reference to Exhibit 10.15 to Form 10-Q for the quarter ended June 30, 2011, filed July 27, 2011)
+10(ii)	Letter dated December 16, 2009 from Northrop Grumman Corporation to Wesley G. Bush regarding compensation effective January 1, 2010 (incorporated by reference to Exhibit 10.2 to Form 8-K filed December 21, 2009)
+10(jj)	Letter agreement dated December 17, 2008 between Northrop Grumman Corporation and Ronald D. Sugar relating to termination of Employment Agreement dated February 19, 2003 (incorporated by reference to Exhibit 10.2 to Form 8-K filed December 19, 2008)
+10(kk)	Letter dated September 16, 2009 from Northrop Grumman Corporation to Dr. Ronald D. Sugar regarding Retirement and Transition (incorporated by reference to Exhibit 99.1 to Form 8-K dated September 16, 2009 and filed September 17, 2009)
+10(ll)	Policy Regarding the Recoupment of Certain Performance-Based Compensation Payments dated March 1, 2010 (incorporated by reference to Exhibit 10.5 to Form 10-Q for the quarter ended March 31, 2010, filed April 28, 2010)
+10(mm)	Offering letter dated June 7, 2010, from Northrop Grumman Corporation to Sheila C. Cheston relating to position of Corporate Vice President and General Counsel
+10(nn)	Letter dated June 23, 2011 from Wes Bush, Chief Executive Officer and President, regarding terms of the relocation arrangement for James F. Palmer, Corporate Vice President and Chief Financial Officer, in connection with the relocation of the headquarters of Northrop Grumman Corporation (incorporated by reference to Exhibit 10.1 to Form 8-K dated June 20, 2011 and filed June 24, 2011)
*12(a)	Computation of Ratio of Earnings to Fixed Charges
*21	Subsidiaries
*23	Consent of Independent Registered Public Accounting Firm
*24	Power of Attorney
*31.1	Rule 13a-15(e)/15d-15(e) Certification of Wesley G. Bush (Section 302 of the Sarbanes-Oxley Act of 2002)
*31.2	Rule 13a-15(e)/15d-15(e) Certification of James F. Palmer (Section 302 of the Sarbanes-Oxley Act of 2002)
**32.1	Certification of Wesley G. Bush pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
**32.2	Certification of James F. Palmer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
*101	Northrop Grumman Corporation Annual Report on Form 10-K for the fiscal year ended December 31, 2011, formatted in XBRL (Extensible Business Reporting Language); (i) the

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**NORTHROP GRUMMAN CORPORATION**

Consolidated Statements of Operations, (ii) Consolidated Statements of Financial Position, (iii) Consolidated Statements of Cash Flows, (iv) Consolidated Statements of Changes in Shareholders' Equity, and (v) Notes to Consolidated Financial Statements

- + Management contract or compensatory plan or arrangement
- \* Filed with this Report
- \*\* Furnished with this Report





**Terms of Director Grants under the 2011 Long-Term Incentive Stock Plan**

**December 21, 2011**

- Except as set forth below, the terms of the equity award provisions under the Northrop Grumman Corporation Stock Plan for Non-Employee Directors, as amended, will continue in effect for stock unit awards, both mandatory and elective, made to the independent directors' under the 2011 Long-Term Incentive Stock Plan unless and until the Board of Directors amends those provisions; and
- For purposes of determining the number of mandatory or elective stock units to be awarded to independent directors each quarter, beginning with compensation for the year 2012, the fair market value will be determined based on the NYSE closing price of a share of the Company's common stock on the last day of the applicable quarter.

NORTHROP GRUMMAN

SUPPLEMENTAL PLAN 2

(Amended and Restated Effective as of January 1, 2012)

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Note: All of the following Appendices are saved as separate documents. Confidential documents may be requested from Benefits Strategy & Design.

APPENDIX A Northrop Supplemental Retirement Income Program For Senior Executives

APPENDIX B ERISA Supplemental Program 2

APPENDIX C Arthur F. Dauer Program (Confidential)

APPENDIX D Nelson Gibbs, Jr. Program (Confidential)

APPENDIX E Oliver Boileau Program (Confidential)

APPENDIX F CPC Supplemental Executive Retirement Program

APPENDIX G Officers Supplemental Executive Retirement Program

APPENDIX H Robert P. Iorizzo Program

APPENDIX I Officers Supplemental Executive Retirement Program II

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The Northrop Grumman Supplemental Plan 2 (the "Plan") is hereby amended and restated effective as of January 1, 2012. This restatement amends the January 1, 2009 restatement of the Plan and includes changes that apply to Grandfathered Amounts.

The Plan is intended to comply with Code section 409A and official guidance issued thereunder (except for Grandfathered Amounts). Notwithstanding any other provision of this Plan, this Plan shall be interpreted, operated and administered in a manner consistent with this intention.

## ARTICLE I

### Definitions

For purposes of the Plan, the following terms, when capitalized, will have the following meanings:

- 1.01 Affiliated Companies. The Company and any other entity related to the Company under the rules of section 414 of the Code. The Affiliated Companies include Northrop Grumman Corporation and its 80%-owned subsidiaries and may include other entities as well.
- 1.02 Board of Directors. The Board of Directors of the Company.
- 1.03 CIC Plans. Northrop Grumman Corporation Change-In-Control Severance Plan (effective August 1, 1996, as amended) or the Northrop Grumman Corporation March 2000 Change-In-Control Severance Plan.
- 1.04 Code. The Internal Revenue Code of 1986, as amended.
- 1.05 Company. Northrop Grumman Corporation.
- 1.06 Deferred Compensation Plan. The Northrop Grumman Deferred Compensation Plan and the Northrop Grumman Savings Excess Plan.
- 1.07 ERISA. The Employee Retirement Income Security Act of 1974, as amended.
- 1.08 Grandfathered Amounts. Plan benefits that were earned and vested as of December 31, 2004 within the meaning of Code section 409A and official guidance thereunder.
- 1.09 Key Employee. An employee treated as a "specified employee" under Code section 409A(a)(2)(B)(i) of the Company or the Affiliated Companies (i.e., a key employee (as defined in Code section

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416(i) without regard to paragraph (5) thereof) if the Company's or an Affiliated Company's stock is publicly traded on an established securities market or otherwise. The Company shall determine in accordance with a uniform Company policy which Participants are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be used. Such determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

1.10 Participant. Any employee of the Company who is eligible for benefits under a particular Program and has not received full payment under the Program.

1.11 Payment Date. The 1st of the month coincident with or following the later of (a) the date the Participant attains age 55, or (b) the date the Participant Separates from Service.

1.12 Pension Plan.

(a) The Northrop Grumman Pension Plan (subject to the special effective dates noted below for the following merged plans)

- The Northrop Grumman Retirement Value Plan (effective as of January 1, 2000)
- The Northrop Grumman Commercial Aircraft Division Salaried Retirement Plan (effective as of July 1, 2000)
- The Grumman Pension Plan (effective as of July 1, 2003)

(b) The Northrop Grumman Electronic Systems – Space Division Consolidated Pension Plan (effective as of October 22, 2001)

(c) The Northrop Grumman Norden Systems Employee Retirement Plan (effective July 1, 2003)

1.13 Plan. The Northrop Grumman Supplemental Plan 2.

1.14 Program. One of the eligibility and benefit structures described in the Appendices.

1.15 Qualified Plan. The Northrop Grumman Pension Plan and Cash Balance Plans (as defined under the Northrop Grumman Pension Plan).

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1.16 Separation from Service or Separates from Service. A “separation from service” within the meaning of Code section 409A.

1.17 Termination of Employment. Complete termination of employment with the Affiliated Companies.

- (a) If a Participant leaves one Affiliated Company to go to work for another, he or she will not have a Termination of Employment.
- (b) A Participant will have a Termination of Employment if he or she leaves the Affiliated Companies because the affiliate he or she works for ceases to be an Affiliated Company because it is sold or spunoff.

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ARTICLE II

General Provisions

- 2.01 In General. The Plan contains a number of different benefit Programs which are set forth in the Appendices. The Appendices describe the eligibility conditions and the amount of benefits payable under the Programs. The Company, in its sole discretion, will determine all eligibility conditions, make all benefit determinations, and otherwise exercise sole authority to interpret the Plan and Programs.
- 2.02 Treatment of 2000 Ad Hoc Increases for Retirees. In no event, however, (1) will this Plan pay any amount of a Participant's retirement benefit, if any, attributable to the "2000 Ad Hoc Increase for Retirees" Appendix added to certain of the Company's tax-qualified plans pursuant to the Board of Directors resolution adopted May 17, 2000, or (2) will a Participant be entitled to a benefit (or an increased benefit) from or as a result of participation in this Plan under the Board of Directors resolution adopted May 17, 2000.
- 2.03 Forms and Times of Benefit Payments. This Section only applies to Grandfathered Amounts. The Company will determine the form and timing of benefit payments in its sole discretion unless particular rules regarding the form and timing of benefit payments are set forth in a Program or where a lump sum election under Article III is applicable.
- (a) For payments made to supplement those of a particular tax-qualified retirement or savings plan, the Company will only select among the options available under that plan, using the same actuarial adjustments used in that plan, except in cases of lump sums.
  - (b) Whenever the present value of the amount payable under a particular Program does not exceed \$10,000, it will be paid in the form of a single lump sum as of the first of the month following Termination of Employment. The lump sum will be calculated using the factors and methodology described in Section 3.06 below (See Section 2.05 for the rule that applies as of January 1, 2008).
  - (c) No payments will commence under this Plan until a Participant has a Termination of Employment, even in cases where benefits have commenced under a qualified retirement plan for Participants over age 70 1/2, or for any other reason.

See Appendix 1 and Appendix 2 for the rules that apply to other benefits earned under the Plan.



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2.04 Beneficiaries and Spouses. This Section only applies to Grandfathered Amounts. If the Company selects a form of payment which includes a survivor benefit, the Participant may make a beneficiary designation, which may be changed at any time prior to commencement of benefits. A beneficiary designation must be in writing and will be effective only when received by the Company.

- (a) If a Participant is married on the date his or her benefits are scheduled to commence, his or her beneficiary will be his or her spouse unless some other beneficiary is named with spousal consent. Spousal consent, to be effective, must be submitted in writing before benefits commence and must be witnessed by a Plan representative or notary public. No spousal consent is necessary if the Company determines that there is no spouse or that the spouse cannot be found.
- (b) With respect to Programs designed to supplement tax-qualified retirement or savings plans, the Participant's spouse will be the spouse as determined under the underlying tax-qualified plan. Otherwise, the Participant's spouse will be determined by the Company in its sole discretion.

See Appendix 1 and Appendix 2 for the rules that apply to other benefits earned under the Plan.

2.05 Mandatory Cashout. Notwithstanding any other provisions in the Plan, Participants with Grandfathered Amounts who have not commenced payment of such benefits prior to January 1, 2008 will be subject to the following rules:

- (a) Post-2007 Terminations. Participants who have a Termination of Employment after 2007 will receive a lump sum distribution of the present value of their Grandfathered Amounts under a Program within two months of Termination of Employment (without interest), if such present value is below the Code section 402(g) limit in effect at the Termination of Employment.
- (b) Pre-2008 Terminations. Participants who had a Termination of Employment before 2008 will receive a lump sum distribution of the present value of their Grandfathered Amounts under a Program within two months of the time they commence payment of their underlying qualified pension plan benefits (without interest), if such present value is below the Code section 402(g) limit in effect at the time such payments commence.

For purposes of calculating present values under this Section, the actual assumptions and calculation procedures for lump sum distributions under the Northrop Grumman Pension Plan shall be used.

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2.06 Optional Payment Forms. Participants with Grandfathered Amounts shall be permitted to elect (a) or (b) below:

- (a) To receive their Grandfathered Amounts in any form of distribution available under the Plan at October 3, 2004, provided that form remains available under the underlying qualified pension plan at the time payment of the Grandfathered Amounts commences. The conversion factors for these distribution forms will be based on the factors or basis in effect under this Plan on October 3, 2004.
- (b) To receive their Grandfathered Amounts in any life annuity form not included in (a) above but included in the underlying qualified pension plan distribution options at the time payment of the Grandfathered Amounts commences. The conversion factors will be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

2.07 Special Tax Distribution. On the date a Participant's retirement benefit is reasonably ascertainable within the meaning of IRS regulations under Code section 3121(v)(2), an amount equal to the Participant's portion of the FICA tax withholding will be distributed in a single lump sum payment. This payment will be based on all benefits under the Plan, including Grandfathered Amounts. This payment will reduce the Participant's future benefit payments under the Plan on an actuarial basis.

2.08 Amendment and Plan Termination. The Company may, in its sole discretion, terminate, suspend or amend this Plan at any time or from time to time, in whole or in part for any reason. This includes the right to amend or eliminate any of the provisions of the Plan with respect to lump sum distributions, including any lump sum calculation factors, whether or not a Participant has already made a lump sum election. Notwithstanding the foregoing, no amendment or termination of the Plan shall reduce the amount of a Participant's accrued benefit under the Plan as of the date of such amendment or termination.

No amendment of the Plan shall apply to the Grandfathered Amounts, unless the amendment specifically provides that it applies to such amounts. The purpose of this restriction is to prevent a Plan amendment from resulting in an inadvertent "material modification" to the Grandfathered Amounts.

The Company may, in its sole discretion, seek reimbursement from the Company's tax-qualified plans to the extent this Plan pays tax-qualified plan

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benefits to which Participants were entitled to or became entitled to under the tax-qualified plans.

2.09 Not an Employment Agreement. Nothing contained in this Plan gives any Participant the right to be retained in the service of the Company, nor does it interfere with the right of the Company to discharge or otherwise deal with Participants without regard to the existence of this Plan.

2.10 Assignment of Benefits. A Participant, surviving spouse or beneficiary may not, either voluntarily or involuntarily, assign, anticipate, alienate, commute, sell, transfer, pledge or encumber any benefits to which he or she is or may become entitled under the Plan, nor may Plan benefits be subject to attachment or garnishment by any of their creditors or to legal process.

Notwithstanding the foregoing, all or a portion of a Participant's benefit may be paid to another person as specified in a domestic relations order that the plan administrator determines is qualified (a "Qualified Domestic Relations Order"). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

- (1) issued pursuant to a State's domestic relations law;
- (2) relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the Participant;
- (3) creates or recognizes the right of a spouse, former spouse, child or other dependent of the Participant to receive all or a portion of the Participant's benefits under the Plan; and
- (4) meets such other requirements established by the plan administrator.

The plan administrator shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the plan administrator may consider the rules applicable to the "domestic relations orders" under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

2.11 Nonduplication of Benefits. This Section applies if, despite Section 2.10, with respect to any Participant (or his or her beneficiaries), the Company is required to make payments under this Plan to a person or entity other than the payees described in the Plan. In such a case, any amounts due the Participant (or his or her beneficiaries) under this Plan will be reduced by the actuarial value of the payments required to be made to such other person or entity.

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- (a) Actuarial value will be determined using the factors and methodology described in Section 3.06 below (in the case of lump sums) and using the actuarial assumptions in the underlying Pension Plan in all other cases.
- (b) In dividing a Participant's benefit between the Participant and another person or entity, consistent actuarial assumptions and methodologies will be used so that there is no increased actuarial cost to the Company.
- 2.12 Funding. Participants have the status of general unsecured creditors of the Company and the Plan constitutes a mere promise by the Company to make benefit payments in the future. The Company may, but need not, fund benefits under the Plan through a trust. If it does so, any trust created by the Company and any assets held by the trust to assist it in meeting its obligations under the Plan will conform to the terms of the model trust, as described in Internal Revenue Service Revenue Procedure 92-64, but only to the extent required by Internal Revenue Service Revenue Procedure 92-65. It is the intention of the Company and Participants that the Plan be unfunded for tax purposes and for purposes of Title I of ERISA.
- Any funding of benefits under this Plan will be in the Company's sole discretion. The Company may set and amend the terms under which it will fund and may cease to fund at any time.
- 2.13 Construction. The Company shall have full discretion to construe and interpret the terms and provisions of this Plan, to make factual determinations and to remedy possible inconsistencies and omissions. The Company's interpretations, constructions and remedies shall be final and binding on all parties, including but not limited to the Affiliated Companies and any Participant or beneficiary. The Company shall administer such terms and provisions in a uniform and nondiscriminatory manner and in full accordance with any and all laws applicable to the Plan.
- 2.14 Governing Law. This Plan shall be governed by the law of the State of California, except to the extent superseded by federal law.
- 2.15 Actions by Company and Claims Procedures. Any powers exercisable by the Company under the Plan shall be utilized by written resolution adopted by the Board of Directors or its delegate. The Board of Directors may by written resolution delegate any of the Company's powers under the Plan and any such delegations may provide for subdelegations, also by written resolution.
- The Company's standardized "Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures" shall apply in handling claims and appeals under this Plan.

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2.16 Plan Representatives. Those authorized to act as Plan representatives will be designated in writing by the Board of Directors or its delegate.

2.17 Number. The singular, where appearing in this Plan, will be deemed to include the plural, unless the context clearly indicates the contrary.

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ARTICLE III

Lump Sum Election

This Article only applies with respect to Grandfathered Amounts. See Appendix 1 and Appendix 2 for the distribution rules that apply to other benefits earned under the Plan.

- 3.01 In General. This Article sets forth the rules under which Participants may elect to receive their benefits in a lump sum. Except as provided in Section 3.05, this Article does not apply to employees in cases where benefits under a particular Program are automatically payable in lump sum form under Article II. This Article will not apply if a particular Program so provides.
- 3.02 Election. Participants may elect to have their benefits paid in the form of a single lump sum under this Section.
- (a) An election to take a lump sum may be made at any time during the 60-day period prior to Termination of Employment and covers both—
    - (1) Benefits payable to the Participant during his or her lifetime, and
    - (2) Survivor benefits (if any) payable to the Participant's beneficiary, including preretirement death benefits (if any) payable to the Participant's spouse.
  - (b) An election does not become effective until the earlier of:
    - (1) the Participant's Termination of Employment, or
    - (2) the Participant's death.
  - (c) Before the election becomes effective, it may be revoked.
  - (d) If a Participant does not have a Termination of Employment within 60 days after making an election, the election will never take effect.
  - (e) An election may only be made once. If it fails to become effective after 60 days or is revoked before becoming effective, it cannot be made again at a later time.
  - (f) After a Participant has a Termination of Employment, no election can be made.

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- (g) If a Participant dies before making a lump sum election, his or her spouse may not make a lump sum election with respect to any benefits which may be due the spouse.
- (h) Elections to receive a lump sum must be made in writing and must include spousal consent if the Participant is married. Elections and spousal consent must be witnessed by a Plan representative or a notary public.
- 3.03 Lump Sum—Retirement Eligible. If a Participant with a valid lump sum election in effect under Section 3.02 has a Termination of Employment after he or she is entitled to commence benefits under the Pension Plans, payments will be made in accordance with this Section.
- (a) Monthly benefit payments will be made for up to 12 months, commencing the first of the month following Termination of Employment. Payments will be made:
- (1) in the case of a Participant who is not married on the date benefits are scheduled to commence, based on a straight life annuity for the Participant's life and ceasing upon the Participant's death should he or she die before the 12 months elapse, or
- (2) in the case of a Participant who is married on the date benefits are scheduled to commence, based on a joint and survivor annuity form—
- (A) with the survivor benefit equal to 50% of the Participant's benefit;
- (B) with the Participant's spouse as the survivor annuitant;
- (C) determined by using the contingent annuitant option factors used to convert straight life annuities to 50% joint and survivor annuities under the Northrop Grumman Retirement Plan; and
- (D) with all payments ceasing upon the death of both the Participant and his or her spouse should they die before the 12 months elapse.
- (b) As of the first of the 13th month, the present value of the remaining benefit payments will be paid in a single lump sum. Payment of the lump sum will be made to the Participant if he or she is still alive, or, if not, to his or her surviving spouse, if any.
- (c) No lump sum payment will be made if:

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- (1) The Participant is receiving monthly benefit payments in the form of a straight life annuity and the Participant dies before the time the lump sum payment is due.
  - (2) The Participant is receiving monthly benefit payments in a joint and survivor annuity form and the Participant and his or her spouse both die before the time the lump sum payment is due.
  - (d) A lump sum will be payable to a Participant's spouse as of the first of the month following the date of the Participant's death, if:
    - (1) the Participant dies after making a valid lump sum election but prior to commencement of any benefits under this Plan;
    - (2) the Participant is survived by a spouse who is entitled to a preretirement surviving spouse benefit under this Plan; and
    - (3) the spouse survives to the first of the month following the date of the Participant's death.
- 3.04 Lump Sum—Not Retirement Eligible. If a Participant with a valid lump sum election in effect under Section 3.02 has a Termination of Employment before he or she is entitled to commence benefits under the Pension Plans, payments will be made in accordance with this Section.
- (a) No monthly benefit payments will be made.
  - (b) Following Termination of Employment, a single lump sum payment of the benefit will be made on the first of the month following 12 months after the date of the Participant's Termination of Employment.
  - (c) A lump sum will be payable to a Participant's spouse as of the first of the month following the date of the Participant's death, if:
    - (1) the Participant dies after making a valid lump sum election but prior to commencement of any benefits under this Plan;
    - (2) the Participant is survived by a spouse who is entitled to a preretirement surviving spouse benefit under this Plan; and
    - (3) the spouse survives to the first of the month following the date of the Participant's death.
  - (d) No lump sum payment will be made if the Participant is unmarried at the time of death and dies before the time the lump sum payment is due.



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3.05 Lump Sums with CIC Severance Plan Election. A Participant who elects lump sum payments of all his or her nonqualified benefits under the CIC Plans is entitled to have his or her benefits paid as a lump sum calculated under the terms of the applicable CIC Plan. Otherwise, benefit payments are governed by the general provisions of this Article, which provide different rules for calculating the amount of lump sum payments.

3.06 Calculation of Lump Sum.

- (a) The factors to be used in calculating the lump sum are as follows:
- (1) Interest: Whichever of the following two rates that produces the smaller lump sum:
    - (A) the discount rate used by the Company for purposes of Statement of Financial Accounting Standards No. 87 of the Financial Accounting Standards Board as disclosed in the Company's annual report to shareholders for the year end immediately preceding the date of distribution, or
    - (B) the applicable interest rate that would be used to calculate a lump sum value for the benefit under the Pension Plans.
  - (2) Mortality: the applicable mortality table, which would be used to calculate a lump sum value for the benefit under the Pension Plans.
  - (3) Increase in Section 415 Limit: 4% per year.
  - (4) Age: Age rounded to the nearest month on the date the lump sum is payable.
  - (5) Variable Unit Values Variable Unit Values are presumed not to increase for future periods after the date the lump sum is payable.
- (b) The annuity to be converted to a lump sum will be the remaining annuity currently payable to the Participant or his or her beneficiary at the time the lump sum is due.
- (1) For example, assume a Participant is receiving benefit payments in the form of a 50% joint and survivor annuity.
  - (2) If the Participant and the survivor annuitant are both still alive at the time the lump sum payment is due, the present value calculation will be based on the remaining benefits that would be paid to both the Participant and the survivor in the annuity form.

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- (3) If only the survivor is alive, the calculation will be based solely on the remaining 50% survivor benefits that would be paid to the survivor.
  - (4) If only the Participant is alive, the calculation will be based solely on the remaining benefits that would be paid to the Participant.
  - (5) In the case of a Participant who dies prior to commencement of benefits under this Plan so that only a preretirement surviving spouse benefit (if any) is payable, the lump sum will be based solely on the value of the preretirement surviving spouse benefit.
- (c) In the case of a lump-sum under Section 3.05 (related to lump sums with a CIC Severance Plan election), the lump-sum amount will be calculated as described in that section and the rules of this Section 3.06 are not used.
- 3.07 Spousal consent. Spousal consent, as required for elections as described above, need not be obtained if the Company determines that there is no spouse or the spouse cannot be located.

\* \* \*

IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and Chief Human Resources Officer

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APPENDIX 1 – 2005-2007 TRANSITION RULES

This Appendix 1 provides the distribution rules that apply to the portion of benefits under the Plan subject to Code section 409A for Participants with benefit commencement dates after January 1, 2005 and before January 1, 2008.

- 1.01 Election. Participants scheduled to commence payments during 2005 may elect to receive both pre-2005 benefit accruals and 2005 benefit accruals in any optional form of benefit available under the Plan as of December 31, 2004. Participants electing optional forms of benefits under this provision will commence payments on the Participant's selected benefit commencement date.
- 1.02 2005 Commencements. Pursuant to IRS Notice 2005-1, Q&A-19 & Q&A-20, Participants commencing payments in 2005 from the Plan may elect a form of distribution from among those available under the Plan on December 31, 2004, and benefit payments shall begin at the time elected by the Participant.
- (a) Key Employees. A Key Employee Separating from Service on or after July 1, 2005, with Plan distributions subject to Code section 409A scheduled to be paid in 2006 and within six months of his date of Separation from Service, shall have such distributions delayed for six months from the Key Employee's date of Separation from Service. The delayed distributions shall be paid as a single sum with interest at the end of the six month period and Plan distributions will resume as scheduled at such time. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years). Alternatively, the Key Employee may elect under IRS Notice 2005-1, Q&A-20 to have such distributions accelerated and paid in 2005 without the interest adjustment, provided, such election is made in 2005.
- (b) Lump Sum Option. During 2005, a temporary immediate lump sum feature shall be available as follows:
- (i) In order to elect a lump sum payment pursuant to IRS Notice 2005-1, Q&A-20, a Participant must be an elected or appointed officer of the Company and eligible to commence payments under the underlying qualified pension plan on or after June 1, 2005 and on or before December 1, 2005;
- (ii) The lump sum payment shall be made in 2005 as soon as feasible after the election; and

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- (iii) Interest and mortality assumptions and methodology for calculating lump sum amount shall be based on the Plan's procedures for calculating lump sums as of December 31, 2004.

1.03 2006 and 2007 Commencements. Pursuant to IRS transition relief, for all benefit commencement dates in 2006 and 2007 (provided election is made in 2006 or 2007), distribution of Plan benefits subject to Code section 409A shall begin 12 months after the later of: (a) the Participant's benefit election date, or (b) the underlying qualified pension plan benefit commencement date (as specified in the Participant's benefit election form). Payments delayed during this 12-month period will be paid at the end of the period with interest. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years).

APPENDIX 2 – POST 2007  
DISTRIBUTION OF 409A AMOUNTS

The provisions of this Appendix 2 shall apply only to the portion of benefits under the Plan that are subject to Code section 409A with benefit commencement dates on or after January 1, 2008. Distribution rules applicable to the Grandfathered Amounts are set forth in Articles II and III, and Appendix 1 addresses distributions of amounts subject to Code section 409A with benefit commencement dates after January 1, 2005 and prior to January 1, 2008.

- 2.01 Time of Distribution. Subject to the special rules provided in this Appendix 2, distributions to a Participant of his vested retirement benefit shall commence as of the Payment Date.
- 2.02 Special Rule for Key Employees. If a Participant is a Key Employee and age 55 or older at his Separation from Service, distributions to the Participant shall commence on the first day of the seventh month following the date of his Separation from Service (or, if earlier, the date of the Participant's death). Amounts otherwise payable to the Participant during such period of delay shall be accumulated and paid on the first day of the seventh month following the Participant's Separation from Service, along with interest on the delayed payments. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such delay (i.e., the rate may change in the event the delay spans two calendar years).
- 2.03 Forms of Distribution. Subject to the special rules provided in this Appendix 2, a Participant's vested retirement benefit shall be distributed in the form of a single life annuity. However, a Participant may elect an optional form of benefit up until the Payment Date. The optional forms of payment are:
- (a) 50% joint and survivor annuity
  - (b) 75% joint and survivor annuity
  - (c) 100% joint and survivor annuity.

If a Participant is married on his Payment Date and elects a joint and survivor annuity, his survivor annuitant will be his spouse unless some other survivor annuitant is named with spousal consent. Spousal consent, to be effective, must be submitted in writing before the Payment Date and must be witnessed by a Plan representative or notary public. No spousal consent is necessary if the Company determines that there is no spouse or that the spouse cannot be found.

- 2.04 Death. If a married Participant dies before the Payment Date, a death benefit will be payable to the Participant's spouse commencing 90 days after the Participant's death. The death benefit will be a

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single life annuity in an amount equal to the survivor portion of a Participant's vested retirement benefit based on a 100% joint and survivor annuity determined on the Participant's date of death. This benefit is also payable to a Participant's domestic partner who is properly registered with the Company in accordance with procedures established by the Company.

2.05 Actuarial Assumptions. Except as provided in Section 2.06 of this Appendix 2, all forms of payment under this Appendix 2 shall be actuarially equivalent life annuity forms of payment, and all conversions from one such form to another shall be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

2.06 Accelerated Lump Sum Payouts.

- (a) Post-2007 Separations. Notwithstanding the provisions of this Appendix 2, for Participants who Separate from Service on or after January 1, 2008, if the present value of (a) the vested portion of a Participant's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date of his Separation from Service, is less than or equal to \$25,000, such benefit amount shall be distributed to the Participant (or his spouse or domestic partner, if applicable) in a lump sum payment. Subject to the special timing rule for Key Employees under Section 2.02 of this Appendix 2, the lump sum payment shall be made within 90 days after the first of the month coincident with or following the date of the Participant's Separation from Service.
- (b) Pre-2008 Separations. Notwithstanding the provisions of this Appendix 2, for Participants who Separate from Service before January 1, 2008, if the present value of (a) the vested portion of a Participant's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date the Participant attains age 55, is less than or equal to \$25,000, such benefit amount shall be distributed to the Participant (or his spouse or domestic partner, if applicable) in a lump sum payment within 90 days after the first of the month coincident with or following the date the Participant attains age 55, but no earlier than January 1, 2008.
- (c) Conflicts of Interest. The present value of a Participant's vested retirement benefit shall also be payable in an immediate lump sum to the extent

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required under conflict of interest rules for government service and permissible under Code section 409A.

- (d) Present Value Calculation. The conversion of a Participant's retirement benefit into a lump sum payment and the present value calculations under this Section 2.06 of this Appendix 2 shall be based on the actuarial assumptions in effect under the Northrop Grumman Pension Plan for purposes of calculating lump sum amounts, and will be based on the Participant's immediate benefit if the Participant is 55 or older at Separation from Service. Otherwise, the calculation will be based on the benefit amount the Participant will be eligible to receive at age 55.

2.07 Effect of Early Taxation. If the Participant's benefits under the Plan are includible in income pursuant to Code section 409A, such benefits shall be distributed immediately to the Participant.

2.08 Permitted Delays. Notwithstanding the foregoing, any payment to a Participant under the Plan shall be delayed upon the Company's reasonable anticipation of one or more of the following events:

- (a) The Company's deduction with respect to such payment would be eliminated by application of Code section 162(m); or
- (b) The making of the payment would violate Federal securities laws or other applicable law;

provided, that any payment delayed pursuant to this Section 2.08 of this Appendix 2 shall be paid in accordance with Code section 409A.

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APPENDIX 3 – COMMITTEES AND APPOINTMENTS

Notwithstanding anything to the contrary in this Plan, effective October 25, 2011, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Article II of the Plan), other than the “Forfeiture of Benefits” provisions in Sections F.10, G.10 and I.10 of the Plan which Sections shall continue to be administered by the Compensation Committee or its delegate, and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.



APPENDIX F  
TO THE NORTHROP GRUMMAN SUPPLEMENTAL PLAN 2

CPC Supplemental Executive Retirement Program

(Amended and Restated Effective as of January 1, 2012)

Appendix F to the Northrop Grumman Supplemental Plan 2 (the "Appendix") is hereby amended and restated effective as of January 1, 2012. This restatement amends the January 1, 2011 restatement and includes changes that apply to Grandfathered Amounts.

F.01 Purpose. The purpose of this Program is to give enhanced retirement benefits to eligible elected officers of the Company's Corporate Policy Council. This Program is intended to supplement benefits that are otherwise available under the Qualified Plans.

Effective as of December 31, 2014, the accrued benefits for all of the Participants under this Program shall be frozen. A Participant's benefit under this Program will be based on his CPC Service and his Final Average Salary as of December 31, 2014, or at such earlier date that the Participant ceases to be eligible for the Program, less the applicable offsets determined on December 31, 2014, or such earlier applicable date. A Participant's service after December 31, 2014 will be considered for the purposes of determining his vesting status, his early retirement eligibility, and calculating the early retirement reductions related to his frozen benefit.

F.02 Definitions and Construction.

- (a) Capitalized terms used in this Appendix that are not defined in this Appendix or Article I of the Plan are taken from the Qualified Plans and are intended to have the same meaning.
- (b) CPC Service.
  - (1) Months of CPC Service will be determined under the rules of the Qualified Plans for determining Credited Service.
  - (2) Only months of Credited Service after the commencement of a Participant's tenure on the Corporate Policy Council will be counted.
  - (3) Months of CPC Service will continue to be counted for a Participant until the earlier of (A) and (B):
    - (A) The date the Participant ceases to earn benefit accrual service under either the Qualified Plans or some other defined benefit plan of the Affiliated Companies that is qualified under section 401(a) of the Code ("Successor Qualified Plan").

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- (B) Cessation of the officer's membership on the Corporate Policy Council (whether because of termination of his membership or dissolution of the Council).
  - (C) Examples: The following examples assume that the Participant continues to earn months of CPC Service under the Qualified Plans until termination of employment.
    - Example 1: Officer A terminates employment with the Affiliated Companies on March 31, 2004. At that time, he is still a member of the CPC. His service under this Program ceases to accrue on March 31, 2004.
    - Example 2: Officer B ceases to be a member of the CPC on December 31, 2005, though continuing to work for the Affiliated Companies after that date. His service under this Program ceases to accrue on December 31, 2005.
- (4) If a Participant is transferred to a position with an Affiliated Company not covered by a Qualified Plan, CPC Service will be determined as the Credited Service under the Participant's last Qualified Plan.
- (A) If such a transfer occurs, the Participant will continue to earn deemed service credits as if he or she were still participating under the Qualified Plan.
  - (B) Those deemed service credits will not be considered as earned under the Qualified Plan for purposes of determining:
    - (i) benefits under the Qualified Plan or supplements to the Qualified Plan other than this Program, or
    - (ii) the offset under Section F.04(b) below, including the early retirement factors associated with the plans included in the offset.
- (c) Eligible Pay. Subject to paragraphs (1) through (4) below, Eligible Pay will generally be determined under the rules of the Participant's supplemental benefit plan (for section 401(a)(17) purposes).
- (1) For periods during which a Participant did not participate in a supplemental benefit plan, Eligible Pay will be determined by reference to the applicable qualified defined benefit retirement plan under which the Participant benefits.

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- (A) Eligible Pay will be calculated without regard to any otherwise applicable limitations under the Code, including section 401(a)(17).
  - (B) Eligible Pay will include compensation deferred under a Deferred Compensation Plan and in connection with the Northrop Grumman Electronic Systems Executive Pension Plan.
  - (C) For purposes of (B), any compensation deferred will only be treated as compensation for Plan benefit calculation purposes in the year(s) payment would otherwise have been made and not in the year(s) of actual payment.
- (2) For periods during which a Participant did not participate in a supplemental benefit plan or a qualified defined benefit retirement plan, Eligible Pay will be his or her annualized base pay (determined in accordance with the Northrop Grumman Retirement Plan), plus any bonuses received.
- (A) Annualized base pay is calculated without regard to any otherwise applicable limitations under the Code, including section 401(a)(17).
  - (B) Annualized base pay includes compensation deferred under a deferred compensation arrangement with those deferrals treated as compensation for Plan benefit calculation purposes in the year(s) payment would otherwise have been made and not in the year(s) of actual payment.
- (3) If a Participant experiences a Termination of Employment before December 31 of any year, Eligible Pay for the year in which the Participant's Termination of Employment occurs is determined in accordance with the Standard Annualization Procedure in Article 2 of the Standard Definitions and Procedures for Certain Northrop Grumman Corporation Retirement Plans.
- (4) The following shall not be considered as Eligible Pay for purposes of determining the amount of any benefit under the Program:
- (A) any payment authorized by the Compensation Committee that is (1) calculated pursuant to the method for determining a bonus amount under the Annual Incentive Plan (AIP) for a given year, and (2) paid in lieu of such bonus in the year prior to the year the bonus would otherwise be paid under the AIP, and
  - (B) any award payment under the Northrop Grumman Long-Term Incentive Cash Plan.

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- (d) Final Average Salary will mean the Participant's average Eligible Pay for the highest three of the last ten consecutive Plan Years. For this purpose, years will be deemed to be consecutive even though a break in service year(s) intervenes.
- Notwithstanding the foregoing, for Participants whose employment ceases after 2005, all Plan Years after 1996 (not just the last ten) shall be considered in determining the highest three years of Eligible Pay. All benefits resulting from this change in determining the highest three years of Eligible Pay shall be subject to Code section 409A.
- (e) The benefits under this Program are designed to supplement benefits under the Qualified Plans and are therefore to be construed utilizing the same principles and benefit calculation methodologies applicable under the Qualified Plans except where expressly modified.
- (f) Benefits under this Program will be calculated without regard to the limits in sections 401(a)(17) and 415 of the Code.

F.03 Eligibility. Eligibility for benefits under this Program will be limited to those elected officers of the Company's Corporate Policy Council, other than Charles H. Noski, designated as "Participants" by the Company's Board of Directors or Compensation Committee. No Participant will be entitled to any benefits under this Appendix F until he or she becomes Vested under the Qualified Plans, except to the extent provided in Section F.08.

No individuals shall become eligible to participate in the Program after June 2009.

F.04 Benefit Amount. A Participant's total accrued benefit under this Program is his or her gross benefit under (a), reduced by (b) (as modified by (c)), and adjusted under (d). The benefit calculated under this Section F.04 will be subject to the benefit limit under Section F.05.

- (a) A Participant's gross annual benefit under this Program will equal  $3.33\% \times \text{Final Average Salary} \times \text{months of CPC Service} \div 12$ .

Effective July 1, 2009, a Participant's gross annual benefit under this Program will equal the sum of (A), (B) and (C) below:

- (A)  $3.33\% \times \text{Final Average Salary} \times \text{months of CPC Service up to 120 months} \div 12$ ,
- (B)  $1.50\% \times \text{Final Average Salary} \times \text{months of CPC Service in excess of 120 months up to 240 months} \div 12$ , and
- (C)  $1.00\% \times \text{Final Average Salary} \times \text{months of CPC Service in excess of 240} \div 12$ .

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Notwithstanding the foregoing, if a Participant had 120 months or more of CPC Service on July 1, 2009, his gross annual benefit under this Program will equal his gross annual benefit under this Program on June 30, 2009 plus accruals in accordance with (B) and (C) above based on CPC Service after June 30, 2009.

- (1) The benefit payable is a single, straight life annuity commencing on the Participant's Normal Retirement Date. The form of benefit and timing of commencement will be determined under Section F.06.
  - (2) If a Participant's benefit is paid under this Program before his Normal Retirement Date, the gross benefit will be adjusted for early commencement in accordance with Section G.04(c).
- (b) The gross benefit under (a) above (multiplied by any applicable early retirement factor) is reduced by the retirement benefits the participant is entitled to receive (including all early retirement subsidies, supplements, and other such benefits) under all defined benefit retirement plans, programs, and arrangements maintained by the Affiliated Companies, whether qualified or nonqualified (but not contributory or defined contribution plans, programs, or arrangements).
- (c) For purposes of the offset adjustment in subsection (b):
- (1) The Participant's gross benefit under subsection (a) will be reduced only by the benefits accrued under the plans described in (b) for the period during which the Participant earns CPC Service.
    - (A) No offset will be made for accruals earned before (or after) participation in this Program.
    - (B) Offsets will be made for benefits accrued under any plan while a Participant:
      - (i) is employed by the Affiliated Companies; or
      - (ii) was employed by a company before it became an Affiliated Company.
    - (C) The offset under (b) includes any benefit enhancements under change-in-control Special Agreements (including enhancements for age and service) that Participants have entered into with the Company ("Special Agreements").
    - (D) The offset under (b) does not include:
      - (i) benefits accrued under the Supplemental Retirement Income Program for Senior Executives described in Appendix A; or

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(ii) Part II benefits under the Litton Restoration Plan and Litton Restoration Plan II.

(2) If a Participant's benefit under this Program commences upon reaching age 65, benefits under all the plans and programs described in (b) above will be compared on the basis of a single, straight life annuity commencing at age 65 using the assumptions in Section F.09.

(3) If a Participant's benefit under this Program commences before age 65, benefits under this Program will be offset for the plans described in (b) above by converting the benefits paid or payable from those plans to an actuarially equivalent single life annuity benefit commencing upon retirement. For this purpose, the benefit will be converted to an early retirement benefit under each applicable plan's terms and further adjusted, if necessary, for different normal forms of benefits or different commencement dates using the actuarial assumptions in Section F.09.

(d) A Participant's benefit under this Program will be no less than the benefit that would have been accrued under Appendix G had the Participant been eligible to participate in that Program.

(1) If the net benefit calculated under Appendix G would be greater than the benefit determined in accordance with Sections F.04(a) through (c), the Participant will receive an additional amount under this Program equal to the difference between the net benefit calculated under Appendix G and the benefit calculated under Sections F.04(a) through (c).

(2) The above comparison will be made following the application of the applicable early retirement factors and offset adjustments under this Program and Appendix G.

F.05 Benefit Limit. A Participant's total accrued benefits under all plans, programs, and arrangements in which he or she participates, including the benefit accrued under Section F.04 and all plans included in Section F.04(b), may not exceed 60% of his or her Final Average Salary. If this limit is exceeded, the Participant's benefit accrued under this Program will be reduced to the extent necessary to satisfy the limit.

(a) The accrued benefits a Participant has earned under the plans included in Section F.04(b) that are taken into account for purposes of this Section are not limited to those benefits accrued during the time he or she participated in this Program (as described in Section F.04(c)(1)), but instead will count all service with the Affiliated Companies.

(b) If a participant has previously received a distribution from one of the plans included in Section F.04(b), that previously received benefit applies toward the limit in this Section.

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- (c) The Participant's Final Average Salary is reduced for early retirement applying the factors in Section G.04(c).
  - (d) The limit in this Section may not be exceeded even after the benefits under this Program have been enhanced under any Special Agreements.

F.06 Payment of Benefits.

- (a) Benefits will generally be paid in accordance with Section 2.03 of the Plan.  
In addition to all other benefit forms otherwise available under this Program, effective as of January 1, 2004, a Participant may elect to have his or her benefits paid in the form of a 75% Joint and Survivor Option. Under this option, the Participant is paid a reduced monthly benefit for life and then, if the Participant's spouse is still alive, a benefit equal to 75% of the Participant's monthly benefit is paid to the spouse for the remainder of his or her life. If the spouse is not still alive when the Participant dies, no further payments are made. The determination of the benefit payable under this option will be made utilizing the factors for a 75% Joint and Survivor Option under the provisions of the Northrop Grumman Retirement Plan.
- (b) Except as provided in subsection (c), benefits will commence as of the first day of the month following the Participant's Termination of Employment or, if later, as of the date the Participant's early retirement benefit commences under the Qualified Plans.
- (c) If a Participant has a Termination of Employment because of Disability before the Participant is eligible for an early retirement benefit from a Qualified Plan, benefits may commence immediately, subject to adjustment for early commencement using the applicable factors and methodologies under Sections F.04(a)(2) and F.04(c)(3).
- (d) If a Participant dies after commencement of benefits, any survivor benefits will be paid in accordance with the form of benefit selected by the Company. If a Participant dies prior to commencement of benefits, payment will be made under Section F.07.

The distribution rules under this Section only apply to Grandfathered Amounts. See Appendix 1 and Appendix 2 for distribution rules that apply to other Plan benefits.

F.07 Preretirement Death Benefits. If a Participant dies before benefits commence, preretirement surviving spouse benefits are payable under this Program if his or her surviving spouse is eligible for a qualified preretirement survivor annuity (as required under section 401(a)(11) of the Code) from a Qualified Plan.

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- (a) Amount and Form of Preretirement Death Benefit. A preretirement death benefit paid to a surviving spouse is the survivor benefit portion of a 100% joint-and-survivor annuity calculated using the survivor annuity factors under the Northrop Grumman Pension Plan in an amount determined as follows:
- (1) First, the Participant's gross benefit under Section F.04(a) will be calculated and reduced, as necessary, for early retirement using the factors in Section F.04(a)(2) and adjusted, as necessary, in accordance with Section F.04(d);
  - (2) Second, the target preretirement death benefit under this Program will be calculated by applying the appropriate 100% joint-and-survivor annuity factor (as provided in the Northrop Grumman Pension Plan) to the amount determined in (1); and
  - (3) Third, the target preretirement death benefit determined in (2) will be reduced by the preretirement death benefits, if any, payable under all defined benefit retirement plans, programs, and arrangements maintained by the Affiliated Companies, whether qualified or nonqualified, that are otherwise included in the offsets described under Section F.04(b) such that the sum of the preretirement death benefit payments made to the surviving spouse under all plans, including this Program, will equal, at all times, the level of payments determined to be the target preretirement death benefit (subject to the benefit limit described in Section G.05(a)).
- (b) Timing of Preretirement Death Benefit.
- (1) Benefits commence as of the first day of the month following the death of the Participant, subject to adjustment for early commencement using the applicable factors under G.04(c).
  - (2) If there is a dispute as to whom payment is due, the Company may delay payment until the dispute is settled.
- (c) No benefit is payable under this Program with respect to a spouse after the spouse dies.

The distribution rules under this Section only apply to Grandfathered Amounts. See Appendix 1 and Appendix 2 for distribution rules that apply to other Plan benefits.

F.08 Individual Arrangements. This Section applies to a Participant who has an individually-negotiated arrangement with the Company for supplemental retirement benefits.

- (a) This Section is intended to coordinate the benefits under this Program with those of any individually-negotiated arrangement. Participants with such arrangements



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will be paid the better of the benefits under the arrangement or under Sections F.04 or F.07 (as limited by F.05).

- (b) In no case will duplicate benefits be paid under this Program and such an individual arrangement. Any payments under this Program will be counted toward the Company's obligations under an individual arrangement, and vice-versa.
- (c) If the benefit under an individually-negotiated arrangement exceeds the one payable under this Program, then the individual benefit will be substituted as the benefit payable under this Program (even if it exceeds the limit under F.05).
- (d) To determine which benefit is greater, all benefits will be compared, subject to adjustment for early retirement using the applicable factors and methodologies under Sections F.04(a)(2) and F.04(c)(3).
- (e) For purposes of (d), the individually-negotiated benefit will be determined in accordance with all of its terms and conditions. Nothing in this Section is meant to alter any of those terms and conditions.
- (f) This Section does not apply to the Special Agreements.

F.09 Actuarial Assumptions: The following defined terms and actuarial assumptions will be used to the extent necessary to convert benefits to straight life annuity form commencing at the Participant's Normal Retirement Date under Sections F.04 and F.08:

Interest: Five percent (5%)

Mortality: The applicable mortality table which would be used to calculate a lump sum value for the benefit under the Qualified Plans.

Increase in Code Section 415 Limit: 2.8% per year.

Variable Unit Values: Variable Unit Values are presumed not to increase for future periods after commencement of benefits.

F.10 Forfeiture of Benefits. Notwithstanding any other provision of this Program, this Section applies to a Participant's total accrued benefit under this Program earned after 2010.

- (a) Determination of a Forfeiture Event. The Compensation Committee or its delegate will, in its sole discretion, determine whether a Forfeiture Event (as defined in subsection (b)) has occurred; provided that no Forfeiture Event shall be incurred by a Participant who has a termination of employment due to mandatory retirement pursuant to Company policy. Such a determination may be made by the Compensation Committee or its delegate for up to one year following the date that the Compensation Committee has actual knowledge of the circumstances that could constitute a Forfeiture Event.

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Effective as of December 20, 2011, notwithstanding the foregoing, no Forfeiture Event shall be incurred by a Participant who, within the two year period following a Change in Control (as defined in the Northrop Grumman 2011 Long-Term Incentive Stock Plan or successor plan in effect at the time the relevant event occurs (LTISP)), is involuntarily terminated for reasons other than Cause or voluntarily terminates for Good Reason. The terms 'Cause' and 'Good Reason' shall be defined in accordance with LTISP and its associated grant certificates. This Section F.10 may not be amended during the two year period commencing on the date of such a Change in Control.

- (b) Forfeiture Event Defined. A "Forfeiture Event" means that, while employed by any of the Affiliated Companies or at any time in the two year period immediately following the Participant's last day of employment by one of the Affiliated Companies, the Participant, either directly or indirectly through any other person, is employed by, renders services (as a director, consultant or otherwise) to, has any ownership interest in, or otherwise participates in the financing, operation, management or control of, any business that is then in competition with the business of any of the Affiliated Companies. A Participant will not, however, be considered to have incurred a Forfeiture Event solely by reason of owning up to (and not more than) two percent (2%) of any class of capital stock of a corporation that is registered under the Securities Exchange Act of 1934.
- (c) Forfeiture of Benefits.
- (1) If the Compensation Committee or its delegate determines that a Forfeiture Event has occurred, the relevant Participant may forfeit up to 100% of his or her total accrued benefit under this Program earned after 2010. The amount forfeited, if any, will be determined by the Compensation Committee or its delegate in its sole discretion, and may consist of all or a portion of the Program benefits earned after 2010 and not yet paid.
  - (2) Program benefits earned by a Participant after 2010 shall be deemed to constitute a proportionate share of each payment of benefits that is not a Grandfathered Amount for purposes of determining the portion of each such payment to be forfeited under subsection (1).
  - (3) Any forfeiture pursuant to this Section will also apply with respect to survivor benefits or benefits assigned under a Qualified Domestic Relations Order.
- (d) Coordination with 60% Benefit Limit. For purposes of applying the 60% of Final Average Salary benefit limit of Section F.05, or any other similar provision in other plans, programs and arrangements of the Affiliated Companies, such benefit limit will be applied as if no forfeiture occurred under this Section F.10.
- (e) Notice and Claims Procedure.

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- (1) The Company will provide timely notice to any Participant who incurs a forfeiture pursuant to this Section F.10. Any delay by the Company in providing such notice will not otherwise affect the amount or timing of any forfeiture determined by the Compensation Committee or its delegate.
  - (2) The procedures set forth in the Company's standardized Northrop Grumman Nonqualified Plans Claims and Appeals Procedures ("Claims Procedures") will apply to any claims and appeals arising out of or related to any forfeiture under this Section F.10, except as provided below:
    - (A) The Compensation Committee, or its delegate, will serve in place of the designated decision-makers on any such claims and appeals.
    - (B) After a claimant has exhausted his remedies under the Claims Procedures, including the appeal stage, the claimant forgoes any right to file a civil action under ERISA section 502(a), but instead may present any claims arising out of or related to any forfeiture under this Section F.10 to final and binding arbitration in the manner described below:
      - (i) A claimant must file a demand for arbitration no later than one year following a final decision on the appeal under the Claims Procedures. After such period, no claim for arbitration may be filed, and the decision becomes final. A claimant must deliver a demand for arbitration to the Company's General Counsel.
      - (ii) Any claims presented shall be settled by arbitration consistent with the Federal Arbitration Act, and consistent with the then-current Arbitration Rules and Procedures for Employment Disputes, or equivalent, established by JAMS, a provider of private dispute resolution services.
      - (iii) The parties will confer to identify a mutually acceptable arbitrator. If the parties are unable to agree on an arbitrator, the parties will request a list of proposed arbitrators from JAMS and:
        - (a) If there is an arbitrator on the list acceptable to both parties, that person will be selected. If there is more than one arbitrator on the list acceptable to both parties, each party will rank each arbitrator in order of preference, and the arbitrator with the highest combined ranking will be selected.

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- (b) If there is no arbitrator acceptable to both parties on the list, the parties will alternately strike names from the list until only one name remains, who will be selected.
- (iv) The fees and expenses of the arbitrator will be borne equally by the claimant and the Company. Each side will be entitled to use a representative, including an attorney, at the arbitration. Each side will bear its own deposition, witness, expert, attorneys' fees, and other expenses to the same extent as if the matter were being heard in court. If, however, any party prevails on a claim, which (if brought in court) affords the prevailing party attorneys' fees and/or costs, then the arbitrator may award reasonable fees and/or costs to the prevailing party to the same extent as would apply in court. The arbitrator will resolve any dispute as to who is the prevailing party and as to the reasonableness of any fee or cost.
- (v) The arbitrator will take into account all comments, documents, records, other information, arguments, and theories submitted by the claimant relating to the claim, or considered by the Compensation Committee or its delegate relating to the claim, but only to the extent that it was previously provided as part of the initial decision or appeal request on the claim.
- The arbitrator may grant a claimant's claim only if the arbitrator determines it is justified based on: (a) the Compensation Committee, or its delegate erred upon an issue of law in the appeal request, or (b) the Compensation Committee's, or its delegate's, findings of fact during the appeal process were not supported by the evidence.
- (vi) The arbitrator shall issue a written opinion to the parties stating the essential findings and conclusions upon which the arbitrator's award is based. The decision of the arbitrator will be final and binding upon the claimant and the Company. A reviewing court may only confirm, correct, or vacate an award in accordance with the standards set forth in the Federal Arbitration Act, 9 U.S.C. §§ 1-16.
- (vii) In the event any court finds any portion of this procedure to be unenforceable, the unenforceable section(s) or provision(s) will be severed from the rest, and the

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remaining section(s) or provisions(s) will be otherwise enforced as written.

(f) Application. Should a Forfeiture Event occur, this Section F.10 is in addition to, and does not in any way limit, any other right or remedy of the Affiliated Companies, at law or otherwise, in connection with such Forfeiture Event.

F.11 Transfer of Liabilities to HII. Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. ("HII") to its shareholders on March 31, 2011 (the "HII Distribution Date"). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Program and the liabilities for these participants' benefits under the Program were transferred to HII. On and after the HII Distribution Date, the Company and the Program, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Program.

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IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and  
Chief Human Resources Officer

APPENDIX G  
TO THE NORTHROP GRUMMAN SUPPLEMENTAL PLAN 2

Officers Supplemental Executive Retirement Program

(Amended and Restated Effective as of January 1, 2012)

Appendix G to the Northrop Grumman Supplemental Plan 2 (the "Appendix") is hereby amended and restated effective as of January 1, 2012. This restatement amends the January 1, 2011 restatement and includes changes that apply to Grandfathered Amounts.

G.01 Purpose. The purpose of this Program is to give enhanced retirement benefits to eligible officers of the Company. This Program is intended to supplement benefits that are otherwise available under the Qualified Plans.

Effective as of December 31, 2014, the accrued benefits for all of the Participants under this Program shall be frozen. A Participant's benefit under this Program will be based on his Months of Benefit Service and his Final Average Salary as of December 31, 2014, or at such earlier date that the Participant ceases to be eligible for the Program, less the applicable offsets determined on December 31, 2014, or such earlier applicable date. A Participant's service after December 31, 2014 will be considered for the purposes of determining his vesting status, his early retirement eligibility, and calculating the early retirement reductions related to his frozen benefit.

G.02 Definitions and Construction.

- (a) Capitalized terms used in this Appendix that are not defined in this Appendix or Article I of the Plan are taken from the Qualified Plans, and are intended to have the same meaning.
- (b) Eligible Pay. Subject to paragraphs (1) through (5) below, Eligible Pay will generally be determined under the rules of the Participant's supplemental benefit plan (for section 401(a)(17) purposes).
  - (1) For periods during which a Participant did not participate in a supplemental benefit plan, Eligible Pay will be determined by reference to the applicable qualified defined benefit retirement plan under which the Participant benefits.
    - (A) Eligible Pay will be calculated without regard to any otherwise applicable limitations under the Code, including section 401(a)(17).
    - (B) Eligible Pay will include compensation deferred under a Deferred Compensation Plan and in connection with the Northrop Grumman Electronic Systems Executive Pension Plan.

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- (C) For purposes of (B), any compensation deferred will only be treated as compensation for Plan benefit calculation purposes in the year(s) payment would otherwise have been made and not in the year(s) of actual payment.
- (2) Special Rules for Certain Participants.
    - (A) Former Northrop Grumman Electronic Systems Executive Pension Plan Participants. For years prior to 2002, Eligible Pay is determined by reference to the Participant's total base salary under the Northrop Grumman Electronic Systems Pension Plan plus any bonuses that were received or would have been received had the Participant not elected to have the amounts deferred under a deferred compensation arrangement. No compensation of any kind paid or otherwise earned while employed by an entity prior to that entity becoming an Affiliated Company will be included in the Participant's Eligible Pay.
    - (B) Employees of Newport News Shipbuilding, Inc. For the period beginning on January 1, 1994 and ending December 31, 2003, Eligible Pay is determined by reference to the Participant's total base salary plus any bonuses that were received or would have been received had the Participant not elected to have the amounts deferred under a deferred compensation arrangement.
  - (3) If a Participant experiences a Termination of Employment before December 31 of any year, Eligible Pay for the year in which the Participant's Termination of Employment occurs is determined in accordance with the Standard Annualization Procedure in Article 2 of the Standard Definitions and Procedures for Certain Northrop Grumman Corporation Retirement Plans.
  - (4) The following shall not be considered as Eligible Pay for purposes of determining the amount of any benefit under the Program:
    - (A) any payment authorized by the Compensation Committee that is (1) calculated pursuant to the method for determining a bonus amount under the Annual Incentive Plan (AIP) for a given year, and (2) paid in lieu of such bonus in the year prior to the year the bonus would otherwise be paid under the AIP, and
    - (B) any award payment under the Northrop Grumman Long-Term Incentive Cash Plan.
  - (5) Eligible Pay shall include amounts earned after a Participant attains age 65, provided any benefits based on such compensation shall be subject to Code section 409A.

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- (c) Final Average Salary for any Plan Year is the Participant's average Eligible Pay for the highest three of the last ten consecutive Plan Years in which the Participant was an employee of an Affiliated Company and a participant in a qualified defined benefit retirement plan. For this purpose, years will be deemed to be consecutive even though a break in service year(s) intervenes.
- Notwithstanding the foregoing, for Participants whose employment ceases after 2005, all Plan Years after 1996 (not just the last ten) shall be considered in determining the highest three years of Eligible Pay. All benefits resulting from this change in determining the highest three years of Eligible Pay shall be subject to Code section 409A.
- (d) Months of Benefit Service.
- (1) Months of Benefit Service will be determined under the rules of the Qualified Plans for determining Credited Service.
  - (2) Months of Benefit Service will continue to be counted for a Participant until the earlier of (A) or (B):
    - (A) The date the Participant ceases to earn benefit accrual service under either the Qualified Plans or some other defined benefit plan of the Affiliated Companies that is qualified under section 401(a) of the Code ("Successor Qualified Plan").
    - (B) Cessation of the Participant's status as an elected or appointed officer of the Company (except as otherwise provided in Section G.04(f)).
  - (3) If a Participant is transferred to a position with an Affiliated Company not covered by a Qualified Plan, Months of Benefit Service will be determined as the Credited Service in the Participant's last Qualified Plan.
    - (A) If such a transfer occurs, the Participant will continue to earn deemed service credits as if he or she were still participating under the Qualified Plan.
    - (B) Those deemed service credits will not be considered as earned under the Qualified Plan for purposes of determining:
      - (i) benefits under the Qualified Plan or supplements to the Qualified Plan other than this Program, or
      - (ii) the offset under Section G.05 below, including the early retirement factors associated with the plans included in the offset.



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- (4) For Participants who become eligible to participate in the Program on or after March 10, 2006, Months of Benefit Service shall not include any time that counts as service under any portion of a plan spun out of the Company's controlled group, if the service is no longer treated as benefit accrual service under a qualified plan in the Company's controlled group.
  - (5) Months of Benefit Service shall continue to be earned after a Participant has attained age 65, provided that any benefits based on such service shall be subject to Code section 409A.
  - (e) The benefits under this Program are designed to supplement benefits under the Qualified Plans and are to be construed using the same principles and benefit calculation methodologies applicable under the Qualified Plans except where expressly modified in this Program.
  - (f) Benefits are calculated without regard to the limits in sections 401(a)(17) and 415 of the Code.
- G.03 Eligibility. Except as otherwise provided in (a) through (f) below, eligibility for benefits under this Program is limited to elected or appointed officers of the Company, other than Charles H. Noski.
- (a) Employees of Newport New Shipbuilding, Inc. will be eligible to participate under this Program effective January 1, 2004.
  - (b) No employees of Vinnell Corporation, Component Technologies, or Premier America Credit Union are eligible for benefits under this Program.
  - (c) No Participant is entitled to any benefits under this Appendix G until he or she becomes Vested under the Qualified Plans, except to the extent provided otherwise in this Appendix G.
  - (d) No individual who is, was, or will be eligible to participate in and receive benefits under Appendix F of the Plan (the "CPC SERP") is eligible to participate under this Program.
  - (e) Notwithstanding any other provisions of this Program to the contrary, elected and appointed officers of the Company's Mission Systems and Space Technology Sectors will be eligible to participate under this Program effective as of January 1, 2005.
  - (f) After June 2008, the only employees who shall become eligible to participate in the Program shall be:
    - (1) individuals who become elected or appointed officers of the Company after June 2008 due to rehire or promotion, provided they have been and continue to be actively accruing benefits under a Company-sponsored qualified defined benefit pension plan, and

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- (2) any other individuals designated for participation in writing by the Vice President, Compensation, Benefits and International (as such title may be modified from time to time).

Notwithstanding the foregoing, no employees shall become eligible to participate in the Program after 2011, including individuals who become elected or appointed officers of the Company due to rehire or promotion.

G.04 Benefit Amount.

- (a) A Participant's annual Normal Retirement Benefit under this Program equals the sum of (1) through (3) below, subject to the limit described in Section G.05:

- (1)  $2.0\% \times \text{Final Average Salary} \times \text{Months of Benefit Service up to 120 months} \div 12$
- (2)  $1.5\% \times \text{Final Average Salary} \times \text{Months of Benefit Service in excess of 120 months up to 240 months} \div 12$
- (3)  $1.0\% \times \text{Final Average Salary} \times \text{Months of Benefit Service in excess of 240 months up to 540 months} \div 12$

However, if an employee performs service during his or her career in covered positions under both this Appendix G and the CPC SERP: the employee's entire benefit will be calculated under Section F.04 of the CPC SERP and payable under the terms of that program; all benefits accrued under this Program will be eliminated; and no amounts will be payable under this Appendix G.

- (b) The total benefit payable is a single, straight life annuity commencing at age 65, assuming an annual benefit equal to the gross benefit under (a). The form of benefit and timing of commencement will be determined under Section G.06.

- (c) If a Participant's benefit is paid under this Program before age 65, the benefit will be adjusted as follows. The Early Retirement Benefit is a monthly benefit equal to the Normal Retirement Benefit reduced by the lesser of:

- (1)  $1/12\text{th of } 2.5\%$  for each calendar month the payment of benefits begins before age 65; or
- (2)  $2.5\%$  for each Benefit Point less than 85 where the Participant's Benefit Points (truncated to reach a whole number) equal the sum of:
  - (A) his or her age (computed to the nearest  $1/12\text{th}$  of a year) at the annuity starting date and

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- (B) 1/12th of his or her months of Credited Service under the applicable Qualified Plan (also computed to the nearest 1/12th of a year) as of the date his or her employment terminated.

A Participant's Vesting Service and months of Credited Service earned under the Qualified Plans (or deemed earned in the event of a transfer) are used to determine whether the Early Retirement Benefit provisions apply and to calculate the early retirement reduction.

- (d) Except as provided otherwise in this Appendix G, no benefit will be paid under this Program if a Participant experiences a Termination of Employment before (1) attaining age 55 and completing 120 Months of Benefit Service, or (2) attaining age 65 and completing 60 Months of Benefit Service.

Notwithstanding any other provision of the Program to the contrary, a Participant who otherwise satisfies the requirements of this subsection (d) is not required to retire and commence benefits under this Program upon his or her Termination of Employment. This provision applies to Grandfathered Amounts only.

- (e) A Participant shall be entitled to benefits notwithstanding the Participant's failure to meet the requirements of Section G.04(d) if the following requirements are satisfied:

- (1) the Participant has been involuntarily terminated without cause or terminated due to the divestiture of his business unit;
- (2) the Participant has reached age 53 and completed 10 years of early retirement eligibility service, or has accumulated 75 points, as of the date of termination, all as determined under the terms of the Northrop Grumman Pension Plan; and
- (3) the Participant is actively accruing benefits under the Program as of the date of termination.

If a Participant receives a notice of an involuntary termination and then transfers to another related entity instead of being involuntarily terminated, the Participant will not qualify for vesting under this subsection (e). If an involuntarily terminated Participant is rehired by the Company, vesting under this subsection (e) would not apply unless the Participant is subsequently terminated and meets the requirements described above.

All benefits payable pursuant to this subsection (e) shall be subject to reduction for early retirement as applicable under Section G.04(c). All benefits payable under this subsection (e) shall be subject to section 409A of the Code.

- (f) The rules set forth in this Section G.04(f) shall apply in the event a Participant ceases to satisfy the eligibility requirements of Section G.03 (the "eligibility

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requirements”) because the Participant is no longer an elected or appointed officer of the Company:

- (1) for purposes of calculating the Participant’s benefit amount pursuant to Section G.04(a), “Eligible Pay” and “Months of Benefit Service” shall not reflect amounts paid or service on or after the date the Participant ceases to satisfy the eligibility requirements, except that in the event the Participant subsequently satisfies the eligibility requirements, “Eligible Pay” and “Months of Benefit Service” shall reflect all pay and past service to the extent consistent with the terms of this Program in effect for newly eligible employees at the time the Participant satisfies the eligibility requirements for the second time;
- (2) for purposes of applying the 60% limitation pursuant to Section G.05(a), “Eligible Pay” shall include amounts paid on or after the date the Participant ceases to satisfy the eligibility requirements;
- (3) for purposes of applying the offset provision of Section G.05(b), benefits accrued under other plans shall reflect pay and service on or after the date the Participant ceases to satisfy the eligibility requirements;
- (4) for purposes of applying Sections G.04(d) and G.04(e), service on or after the date the Participant ceases to satisfy the eligibility requirements shall continue to count as service, provided that if the Participant would not otherwise receive benefits if not for the application of this paragraph (4), all benefits shall be subject to section 409A of the Code;
- (5) for purposes of applying the reduction for early retirement pursuant to Section G.04(c), service on or after the date the Participant ceases to satisfy the eligibility requirements shall continue to count as service.

G.05 Benefit Limit. Accruals under Section G.04 will be limited as provided in this Section.

- (a) A Participant’s total accrued benefits under all plans, programs, and arrangements in which he or she participates, including the benefit accrued under Section G.04 and all plans included in Section G.05(b), may not exceed 60% of his or her Final Average Salary. If this limit is exceeded, the Participant’s benefit accrued under this Program will be reduced to the extent necessary to satisfy the limit.
  - (1) The Participant’s Final Average Salary will be reduced for early retirement applying the factors in Section G.04(c).
  - (2) The limit in this subsection may not be exceeded even after the benefits under this Program have been enhanced under any Special Agreements.

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- (b) The gross benefit calculated under Section G.04 above (multiplied by any applicable early retirement factor) is reduced by the retirement benefits the participant is entitled to receive (including all early retirement subsidies, supplements, and other such benefits) under all defined benefit retirement plans, programs, and arrangements maintained by the Affiliated Companies, whether qualified or nonqualified (but not contributory or defined contribution plans, programs, or arrangements).
- (c) For purposes of the offset in subsection (b):
- (1) Offsets will be made:
    - (A) with respect to:
      - (i) benefits accrued under any plan while a Participant is employed by the Affiliated Companies; and
      - (ii) benefits accrued under any plan while a Participant was employed by a company before it became an Affiliated Company;
    - (B) with respect to any benefit enhancements under change-in-control Special Agreements (including enhancements for age and service) that Participants have entered into with the Company (“Special Agreements”); and
    - (C) without regard to:
      - (i) benefits accrued under the Supplemental Retirement Income Program for Senior Executives described in Appendix A;
      - (ii) Part II benefits under the Litton Restoration Plan and Litton Restoration Plan II; or
      - (iii) benefits accrued under the Company’s Pilot’s Transition Plan.
  - (2) If a Participant’s benefit under this Program commences upon reaching age 65, the Participant’s benefits under all the plans and programs described in (b) above will be compared on the basis of a single, straight life annuity commencing at age 65 using the assumptions stated in Section G.09.
  - (3) If a Participant’s benefit under this Program commences before age 65, benefits under this Program will be offset for the plans described in (b) above by converting the benefits paid or payable from those plans to an actuarially equivalent single life annuity benefit commencing upon

retirement. For this purpose, the benefit will be converted to an early retirement benefit under each applicable plan's terms and further adjusted, if necessary, for different normal forms of benefits or different commencement dates using the actuarial assumptions of Section G.09.

- (4) If a Participant previously received a distribution under one of the plans described in (b) above for a period of service that counts as Months of Benefit Service, that previously received benefit applies toward the limit under this Section.
- (e) Example: A Participant elects to receive an early retirement benefit at age 55 after completing 240 Months of Benefit Service with Final Average Salary equal to \$250,000. The Participant has accrued monthly benefits under the Northrop Grumman Electronic Systems Pension Plan (the "ES Plan") equal to \$2,550 payable at age 55, the Northrop Grumman ERISA Supplemental Program 2 ("ERISA 2") equal to \$600 payable at age 55, and the Northrop Grumman Electronic Systems Executive Pension Plan (the "ES EPP") equal to \$600 payable at age 65. The Participant's pre-offset benefit under this Program, calculated in accordance with Section G.04, equals 35% of the Participant's Final Average Salary (\$250,000) x 75% to account for the early retirement reduction under Section G.04(c). This results in a monthly gross benefit under this Program, before the benefit limit is applied, equal to \$5,468.75. The Participant's total net benefit is calculated, taking into account the offset under (b) above, by reducing the gross benefit by the following:
- (1) the \$2,550 monthly benefit under the ES Plan payable at age 55, subject to that plan's conversion factors; and
  - (2) the \$600 ERISA 2 early retirement single life annuity payable at age 55.
  - (3) No offset results from the ES EPP, however, because the Participant is not eligible to receive a benefit at age 55 under that plan.
- This results in a monthly gross benefit under this Program equal to \$2,318.75.

G.06 Payment of Benefits.

- (a) Benefits will generally be paid in accordance with Section 2.03 of the Plan.
- In addition to all other benefit forms otherwise available under this Program, effective as of January 1, 2004, a Participant may elect to have his or her benefits paid in the form of a 75% Joint and Survivor Option. Under this option, the Participant is paid a reduced monthly benefit for life and then, if the Participant's spouse is still alive, a benefit equal to 75% of the Participant's monthly benefit is paid to the spouse for the remainder of his or her life. If the spouse is not still

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alive when the Participant dies, no further payments are made. The determination of the benefit payable under this option will be made utilizing the factors for a 75% Joint and Survivor Option under the provisions of the Northrop Grumman Retirement Plan.

- (b) Except as provided in (c), benefits will commence as of the first day of the month following the Participant's Termination of Employment or, if later, as of the date the Participant's early retirement benefit commences under the Qualified Plans.
- (c) If a Participant has a Termination of Employment because of disability before the Participant is eligible for an early retirement benefit from a Qualified Plan, benefits may commence immediately, subject to adjustment for early commencement using the applicable factors and methodologies under Sections G.04(c) and G.05(c)(3).
- (d) If a Participant dies after commencement of benefits, any survivor benefits will be paid in accordance with the form of benefit selected by the Company. If a Participant dies prior to commencement of benefits, payment will be made under Section G.07.

The distribution rules under this Section only apply to Grandfathered Amounts. See Appendix 1 and Appendix 2 for distribution rules that apply to other Plan benefits.

G.07 Preretirement Death Benefits. If a Participant dies before benefits commence, preretirement surviving spouse benefits are payable under this Program on behalf of the Participant if his or her surviving spouse is eligible for a qualified preretirement survivor annuity (as required under section 401(a)(11) of the Code) from a Qualified Plan.

- (a) Amount and Form of Preretirement Death Benefit. A preretirement death benefit paid to a surviving spouse is the survivor benefit paid to a surviving spouse is the survivor benefit portion of a 100% joint and survivor annuity calculated using the survivor annuity factors under the Northrop Grumman Pension Plan in an amount determined as follows:
  - (1) First, the Participant's gross benefit under Section G.04(a) will be calculated and reduced, as necessary, for early retirement using the factors in Section G.04(c);
  - (2) Second, the target preretirement death benefit under this Program will be calculated by applying the appropriate 100% joint-and-survivor annuity factor (as provided in the Northrop Grumman Pension Plan) to the amount determined in (1); and
  - (3) Third, the target preretirement death benefit determined in (2) will be reduced by the preretirement death benefits, if any, payable under all defined benefit retirement plans, programs, and arrangements maintained

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by the Affiliated Companies, whether qualified or nonqualified, that are otherwise included in the offsets described under Section G.05(b) such that the sum of the preretirement death benefit payments made to the surviving spouse under all plans, including this Program, will equal, at all times, the level of payments determined to be the target preretirement death benefit (subject to the benefit limit described in Section G.05(a)).

- (b) Timing of Preretirement Death Benefit.
  - (1) Benefits commence as of the first day of the month following the death of the Participant, subject to adjustment for early commencement using the applicable factors under G.04(c).
  - (2) If there is a dispute as to whom payment is due, the Company may delay payment until the dispute is settled.
- (c) No benefit is payable under this Program with respect to a spouse after the spouse dies.

The distribution rules under this Section only apply to Grandfathered Amounts. See Appendix 1 and Appendix 2 for distribution rules that apply to other Plan benefits.

G.08 Individual Arrangements. This Section applies to a Participant who has an individually-negotiated arrangement with the Company for supplemental retirement pension benefits. Notwithstanding any other provision to the contrary, this Section does not apply to any individually-negotiated arrangements between a Participant and the Company concerning severance payments.

- (a) This Section is intended to coordinate the benefits under this Program with those of any individually-negotiated arrangement. Participants with such arrangements will be paid the better of the benefits under the arrangement or under Sections G.04 or G.07 (as limited by G.05).
- (b) In no case will duplicate benefits be paid under this Program and such an individual arrangement. Any payments under this Program will be counted toward the Company's obligations under an individual arrangement, and vice-versa.
- (c) If the benefit under an individually-negotiated arrangement exceeds the one payable under this Program, then the individual benefit will be substituted as the benefit payable under this Program (even if it exceeds the limit under G.05).
- (d) To determine which benefit is greater, all benefits will be compared, subject to adjustment for early retirement using the applicable factors and methodologies under Sections G.04(c) and G.05(c)(3).



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- (e) For purposes of (d), the individually-negotiated benefit will be determined in accordance with all of its terms and conditions. Nothing in this Section is meant to alter any of those terms and conditions.
- (f) This Section does not apply to the Special Agreements.
- G.09 Actuarial Assumptions. The following defined terms and actuarial assumptions will be used to the extent necessary under Sections G.05 and G.08 to convert benefits to straight life annuity form commencing upon the Participant reaching age 65:
- Interest: Five percent (5%)
- Mortality: The applicable mortality table which would be used to calculate a lump sum value for the benefit under the Qualified Plans.
- Increase in Code Section 415 Limit: 2.8% per year.
- Variable Unit Values Variable Unit Values are presumed not to increase for future periods after commencement of benefit.
- G.10 Forfeiture of Benefits. Notwithstanding any other provision of this Program, this Section applies to a Participant's total accrued benefit under this Program earned after 2010.
- (a) Determination of a Forfeiture Event. The Compensation Committee or its delegate will, in its sole discretion, determine whether a Forfeiture Event (as defined in subsection (b)) has occurred; provided that no Forfeiture Event shall be incurred by a Participant who has a termination of employment due to mandatory retirement pursuant to Company policy. Such a determination may be made by the Compensation Committee or its delegate for up to one year following the date that the Compensation Committee has actual knowledge of the circumstances that could constitute a Forfeiture Event.
- Effective as of December 20, 2011, notwithstanding the foregoing, no Forfeiture Event shall be incurred by a Participant who, within the two year period following a Change in Control (as defined in the Northrop Grumman 2011 Long-Term Incentive Stock Plan or successor plan in effect at the time the relevant event occurs (LTISP)), is involuntarily terminated for reasons other than Cause or voluntarily terminates for Good Reason. The terms 'Cause' and 'Good Reason' shall be defined in accordance with LTISP and its associated grant certificates. This Section G.10 may not be amended during the two year period commencing on the date of such a Change in Control.
- (b) Forfeiture Event Defined. A "Forfeiture Event" means that, while employed by any of the Affiliated Companies or at any time in the two year period immediately following the Participant's last day of employment by one of the Affiliated

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Companies, the Participant, either directly or indirectly through any other person, is employed by, renders services (as a director, consultant or otherwise) to, has any ownership interest in, or otherwise participates in the financing, operation, management or control of, any business that is then in competition with the business of any of the Affiliated Companies. A Participant will not, however, be considered to have incurred a Forfeiture Event solely by reason of owning up to (and not more than) two percent (2%) of any class of capital stock of a corporation that is registered under the Securities Exchange Act of 1934.

(c) Forfeiture of Benefits.

- (1) If the Compensation Committee or its delegate determines that a Forfeiture Event has occurred, the relevant Participant may forfeit up to 100% of his or her total accrued benefit under this Program earned after 2010. The amount forfeited, if any, will be determined by the Compensation Committee or its delegate in its sole discretion, and may consist of all or a portion of the Program benefits earned after 2010 and not yet paid.
- (2) Program benefits earned by a Participant after 2010 shall be deemed to constitute a proportionate share of each payment of benefits that is not a Grandfathered Amount for purposes of determining the portion of each such payment to be forfeited under subsection (1).
- (3) Any forfeiture pursuant to this Section will also apply with respect to survivor benefits or benefits assigned under a Qualified Domestic Relations Order.

(d) Coordination with 60% Benefit Limit. For purposes of applying the 60% of Final Average Salary benefit limit of Section G.05, or any other similar provision in other plans, programs and arrangements of the Affiliated Companies, such benefit limit will be applied as if no forfeiture occurred under this Section G.10.

(e) Notice and Claims Procedure.

- (1) The Company will provide timely notice to any Participant who incurs a forfeiture pursuant to this Section G.10. Any delay by the Company in providing such notice will not otherwise affect the amount or timing of any forfeiture determined by the Compensation Committee or its delegate.
- (2) The procedures set forth in the Company's standardized Northrop Grumman Nonqualified Plans Claims and Appeals Procedures ("Claims Procedures") will apply to any claims and appeals arising out of or related to any forfeiture under this Section G.10, except as provided below:
  - (A) The Compensation Committee, or its delegate, will serve in place of the designated decision-makers on any such claims and appeals.

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- (B) After a claimant has exhausted his remedies under the Claims Procedures, including the appeal stage, the claimant forgoes any right to file a civil action under ERISA section 502(a), but instead may present any claims arising out of or related to any forfeiture under this Section G.10 to final and binding arbitration in the manner described below:
- (i) A claimant must file a demand for arbitration no later than one year following a final decision on the appeal under the Claims Procedures. After such period, no claim for arbitration may be filed, and the decision becomes final. A claimant must deliver a demand for arbitration to the Company's General Counsel.
  - (ii) Any claims presented shall be settled by arbitration consistent with the Federal Arbitration Act, and consistent with the then-current Arbitration Rules and Procedures for Employment Disputes, or equivalent, established by JAMS, a provider of private dispute resolution services.
  - (iii) The parties will confer to identify a mutually acceptable arbitrator. If the parties are unable to agree on an arbitrator, the parties will request a list of proposed arbitrators from JAMS and:
    - (a) If there is an arbitrator on the list acceptable to both parties, that person will be selected. If there is more than one arbitrator on the list acceptable to both parties, each party will rank each arbitrator in order of preference, and the arbitrator with the highest combined ranking will be selected.
    - (b) If there is no arbitrator acceptable to both parties on the list, the parties will alternately strike names from the list until only one name remains, who will be selected.
  - (iv) The fees and expenses of the arbitrator will be borne equally by the claimant and the Company. Each side will be entitled to use a representative, including an attorney, at the arbitration. Each side will bear its own deposition, witness, expert, attorneys' fees, and other expenses to the same extent as if the matter were being heard in court. If, however, any party prevails on a claim, which (if brought in court) affords the prevailing party attorneys' fees and/or costs, then the arbitrator may award reasonable fees and/or costs to the prevailing party to the same extent as would

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apply in court. The arbitrator will resolve any dispute as to who is the prevailing party and as to the reasonableness of any fee or cost.

- (v) The arbitrator will take into account all comments, documents, records, other information, arguments, and theories submitted by the claimant relating to the claim, or considered by the Compensation Committee or its delegate relating to the claim, but only to the extent that it was previously provided as part of the initial decision or appeal request on the claim.

The arbitrator may grant a claimant's claim only if the arbitrator determines it is justified based on: (a) the Compensation Committee, or its delegate erred upon an issue of law in the appeal request, or (b) the Compensation Committee's, or its delegate's, findings of fact during the appeal process were not supported by the evidence.

- (vi) The arbitrator shall issue a written opinion to the parties stating the essential findings and conclusions upon which the arbitrator's award is based. The decision of the arbitrator will be final and binding upon the claimant and the Company. A reviewing court may only confirm, correct, or vacate an award in accordance with the standards set forth in the Federal Arbitration Act, 9 U.S.C. §§ 1-16.

- (vii) In the event any court finds any portion of this procedure to be unenforceable, the unenforceable section(s) or provision(s) will be severed from the rest, and the remaining section(s) or provisions(s) will be otherwise enforced as written.

- (f) Application. Should a Forfeiture Event occur, this Section G.10 is in addition to, and does not in any way limit, any other right or remedy of the Affiliated Companies, at law or otherwise, in connection with such Forfeiture Event.

G.11 Grumman SRP Participants. The following special rules shall apply to Participants who are entitled to benefits under the Northrop Grumman Corporation Supplemental Retirement Plan (the "SRP"). Any additional accrued benefits resulting from these special rules shall be subject to Code Section 409A.

- (a) The offset provided for in Section G.05(b) related to an SRP benefit shall be based on the amount payable under the 15-year certain payment form in the SRP, not the actuarially equivalent single life annuity amount.

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- (b) The offset for the SRP amount shall be applied after the benefit under this Program has been converted into any optional form of payment elected.
  - (c) When payments cease under the SRP after 15 years, the annual benefit under this Program shall increase by the amount of the annual benefit that was being paid under the SRP.
- G.12 TASC Participants. Participants who are actively employed in a TASC Entity: 254 or 255 on the date the entities are transferred to an unrelated buyer (“TASC Closing Date”) will be 100% vested in their benefit under the Program on the TASC Closing Date. No pay or service after the TASC Closing Date will count for purposes of determining the amount of such a Participant’s benefit under the Program. The offsets that apply to a Participant’s benefit under Section G.05(b) shall be determined on the date the Participant’s benefits payments commence under the Program. All benefits that become vested under this Section G.12 shall be subject to section 409A of the Code.
- G.13 Transfer of Liabilities to HII. Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. (“HII”) to its shareholders on March 31, 2011 (the “HII Distribution Date”). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Program and the liabilities for these participants’ benefits under the Program were transferred to HII. On and after the HII Distribution Date, the Company and the Program, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Program.

\* \* \*

IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and  
Chief Human Resources Officer

NORTHROP GRUMMAN  
ERISA SUPPLEMENTAL PLAN  
(Amended and Restated Effective as of January 1, 2012)

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## INTRODUCTION

The Northrop Grumman ERISA Supplemental Plan (the "Plan"), formerly known as the Northrop Corporation ERISA Supplemental Plan 1, is hereby amended and restated effective as of January 1, 2012. This restatement amends the January 1, 2011 restatement of the Plan and includes changes that apply to Grandfathered Amounts.

The Plan is intended to comply with Code section 409A and official guidance issued thereunder (except for Grandfathered Amounts). Notwithstanding any other provision of this Plan, this Plan shall be interpreted, operated and administered in a manner consistent with this intention.

### ARTICLE I

#### Definitions

For purposes of the Plan, the following terms, when capitalized, will have the following meanings:

- 1.01 Affiliated Companies. The Company and any other entity related to the Company under the rules of section 414 of the Code. The Affiliated Companies include Northrop Grumman Corporation and its 80%-owned subsidiaries and may include other entities as well.
- 1.02 CIC Plans. Northrop Grumman Corporation Change-In-Control Severance Plan (effective August 1, 1996, as amended) or the Northrop Grumman Corporation March 2000 Change-In-Control Severance Plan.
- 1.03 Code. The Internal Revenue Code of 1986, as amended.
- 1.04 Company. The Company as designated in the Pension Plans.
- 1.05 Grandfathered Amounts. Plan benefits that were earned and vested as of December 31, 2004 within the meaning of Code section 409A and official guidance thereunder.
- 1.06 Key Employee. An employee treated as a "specified employee" under Code section 409A(a)(2)(B)(i) of the Company or the Affiliated Companies (i.e., a key employee (as defined in Code section 416(i) without regard to paragraph (5) thereof) if the Company's or an Affiliated Company's stock is publicly traded on an established securities market or otherwise. The Company shall determine in accordance with a uniform Company policy which Participants are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be

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used. Such determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

- 1.07 Participant. Any employee who (a) is eligible for benefits under one or both Pension Plans, (b) meets the eligibility requirements of Section 2.02 of this Plan and (c) and has not received full payment under the Plan.
- 1.08 Payment Date. The 1st of the month coincident with or following the later of (a) the date the Participant attains age 55, or (b) the date the Participant Separates from Service.
- 1.09 Plan. The Northrop Grumman ERISA Supplemental Plan, formerly known as the Northrop Corporation ERISA Supplemental Plan 1.
- 1.10 Pension Plan Benefits. This term is defined in Section 2.08 of this Plan.
- 1.11 Pension Plan and Pension Plans. Any of the following:
- (a) The Northrop Grumman Retirement Plan
  - (b) The Northrop Grumman Retirement Plan—Rolling Meadows Site
  - (c) The Northrop Grumman Retirement Value Plan (effective as of January 1, 2000)
  - (d) The Northrop Grumman Electronics Systems – Space Division Salaried Employees’ Pension Plan (effective as of the Aerojet Closing Date)
  - (e) The Northrop Grumman Electronics Systems – Space Division Union Employees’ Pension Plan (effective as of the Aerojet Closing Date)
- “Aerojet Closing Date” means the Closing Date specified in the April 19, 2001 Asset Purchase Agreement by and Between Aerojet-General Corporation and Northrop Grumman Systems Corporation.
- 1.12 Separation from Service or Separates from Service. A “separation from service” within the meaning of Code section 409A.
- 1.13 Termination of Employment. Complete termination of employment with the Affiliated Companies.
- (a) If a Participant leaves one Affiliated Company to go to work for another, he or she will not have a Termination of Employment.
  - (b) A Participant will have a Termination of Employment if he or she leaves the Affiliated Companies because the affiliate he or she works for ceases to be an Affiliated Company because it is sold or spunoff.

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ARTICLE II

Eligibility for and Amount of Benefits

2.01 Purpose. The purpose of this Plan is simply to restore to employees of the Company the benefits they lose under the Pension Plans as a result of the benefit limits in Code section 415, as amended, or any successor section (“section 415”), as the benefit limits are described in the applicable Pension Plan.

2.02 Eligibility. Each Participant is eligible to receive a benefit under this Plan if:

- (a) he or she has vested in benefits under one or more of the Pension Plans;
- (b) he or she has vested benefits reduced because of the application of section 415;
- (c) he or she is not eligible to receive a benefit under the Northrop Corporation Supplemental Retirement Income Program for Senior Executives or any other plan or program which bars an employee from participation in this Plan; and
- (d) he or she is not a “Participant” in the Charles H. Noski Executive Retirement Plan as that term is defined under that plan.

2.03 Amount of Benefit. The benefit payable from the Company under this Plan to a Participant will equal the retirement benefit, if any, which would have been payable to the Participant under the terms of a Pension Plan but for the restrictions of section 415 (as described in the applicable Pension Plan).

The benefit payable under this Plan will be reduced by the amount of Pension Plan Benefits attributable to the applicable Pension Plan.

Benefits under this Plan will only be paid to supplement benefit payments actually made from a Pension Plan. If benefits are not payable under a Pension Plan because the Participant has failed to vest or for any other reason, no payments will be made under this Plan with respect to such Pension Plan.

In no event, however, (1) will this Plan pay any amount of a Participant’s retirement benefit, if any, attributable to the “2000 Ad Hoc Increase for Retirees” Appendix added to certain of the Company’s tax-qualified plans pursuant to the Board of Directors resolution adopted May 17, 2000, or (2) will a Participant be entitled to a benefit (or an increased benefit) from or as a result of participation in this Plan under the Board of Directors resolution adopted May 17, 2000.

The following shall not be considered as compensation for purposes of determining the amount of any benefit under the Plan:

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- (1) any payment authorized by the Compensation Committee that is (a) calculated pursuant to the method for determining a bonus amount under the Annual Incentive Plan (AIP) for a given year, and (b) paid in lieu of such bonus in the year prior to the year the bonus would otherwise be paid under the AIP, and
  - (2) any award payment under the Northrop Grumman Long-Term Incentive Cash Plan.

2.04 Preretirement Surviving Spouse Benefit. This Section only applies to Grandfathered Amounts.

Preretirement surviving spouse benefits will be payable under this Plan on behalf of a Participant if such Participant's surviving spouse is eligible for preretirement surviving spouse benefits payable from a Pension Plan. The benefit payable will be the amount which would have been payable under the Pension Plan but for the restrictions of section 415 (as described in the applicable Pension Plan).

The benefit payable under this Plan will be reduced by the amount of Pension Plan Benefits attributable to the applicable Pension Plan.

No benefit will be payable under this Plan with respect to a spouse after the death of that spouse.

See Appendix A and Appendix B for the rules that apply to other benefits earned under the Plan.

2.05 Forms and Times of Benefit Payments. This Section only applies to Grandfathered Amounts.

The Company will determine the form and timing of benefit payments in its sole discretion. However, for payments made to supplement those of a particular Pension Plan, the Company will only select among the options available under that Pension Plan, and using the same actuarial adjustments used in that Pension Plan except in cases of lump sums.

Whenever the present value of the amount payable under the Plan does not exceed \$10,000, it will be paid in the form of a single lump sum as of the first of the month following Termination of Employment. The lump sum will be calculated using the factors and methodology described in Section 3.08 below. (See Section 2.09 for the rule that applies as of January 1, 2008).

No payments will commence under this Plan until a Participant has a Termination of Employment, even in cases where benefits have commenced under a Pension Plan for Participants over age 70-1/2.

See Appendix A and Appendix B for the rules that apply to other benefits earned under the Plan.

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2.06 Beneficiaries and Spouses. This Section only applies to Grandfathered Amounts.

If the Company selects a form of payment which includes a survivor benefit, the Participant may make a beneficiary designation, which may be changed at any time prior to commencement of benefits. A beneficiary designation must be in writing and will be effective only when received by the Company.

If a Participant is married on the date his or her benefits are scheduled to commence, his or her beneficiary will be his or her spouse unless some other beneficiary is named with spousal consent. Spousal consent, to be effective, must be submitted in writing before benefits commence and must be witnessed by a Plan representative or notary public. No spousal consent is necessary if the Company determines that there is no spouse or that the spouse cannot be found.

The Participant's spouse will be the spouse as determined under the underlying Pension Plan.

See Appendix A and Appendix B for the rules that apply to other benefits earned under the Plan.

2.07 Plan Termination. No further benefits may be earned under this Plan with respect to a particular Pension Plan after the termination of such Pension Plan.

2.08 Pension Plan Benefits. The term "Pension Plan Benefits" generally means the benefits actually payable to a Participant, spouse, beneficiary or contingent annuitant under a Pension Plan. However, this Plan is only intended to remedy pension reductions caused by the operation of section 415 and not reductions caused for any other reason. In those instances where pension benefits are reduced for some other reason, the term "Pension Plan Benefits" shall be deemed to mean the benefits that would have been actually payable but for such other reason.

Examples of such other reasons include, but are not limited to, the following:

- (a) A reduction in pension benefits as a result of a distress termination (as described in ERISA § 4041(c) or any comparable successor provision of law) of a Pension Plan. In such a case, the Pension Plan Benefits will be deemed to refer to the payments that would have been made from the Pension Plan had it terminated on a fully funded basis as a standard termination (as described in ERISA § 4041(b) or any comparable successor provision of law).
- (b) A reduction of accrued benefits as permitted under Code section 412(c)(8), as amended, or any comparable successor provision of law.
- (c) A reduction of pension benefits as a result of payment of all or a portion of a Participant's benefits to a third party on behalf of or with respect to a Participant.

2.09 Mandatory Cashout. Notwithstanding any other provisions in the Plan, Participants with Grandfathered Amounts who have not commenced payment of such benefits prior to January 1, 2008 will be subject to the following rules:

- (a) Post-2007 Terminations. Participants who have a Termination of Employment after 2007 will receive a lump sum distribution of the present value of their Grandfathered Amounts within two months of Termination of Employment (without interest), if such present value is below the Code section 402(g) limit in effect at the Termination of Employment.
- (b) Pre-2008 Terminations. Participants who had a Termination of Employment before 2008 will receive a lump sum distribution of the present value of their Grandfathered Amounts within two months of the time they commence payment of their underlying qualified pension plan benefits (without interest), if such present value is below the Code section 402(g) limit in effect at the time such payments commence.

For purposes of calculating present values under this Section, the actual assumptions and calculation procedures for lump sum distributions under the Northrop Grumman Pension Plan shall be used.

2.10 Optional Payment Forms. Participants with Grandfathered Amounts shall be permitted to elect (a) or (b) below:

- (a) To receive their Grandfathered Amounts in any form of distribution available under the Plan at October 3, 2004, provided that form remains available under the underlying qualified pension plan at the time payment of the Grandfathered Amounts commences. The conversion factors for these distribution forms will be based on the factors or basis in effect under this Plan on October 3, 2004.
- (b) To receive their Grandfathered Amounts in any life annuity form not included in (a) above but included in the underlying qualified pension plan distribution options at the time payment of the Grandfathered Amounts commences. The conversion factors will be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

2.11 Special Tax Distribution. On the date a Participant's retirement benefit is reasonably ascertainable within the meaning of IRS regulations under Code section 3121(v)(2), an amount equal to the Participant's portion of the FICA tax withholding will be distributed in a single lump sum payment. This payment will be based on all benefits under the Plan, including Grandfathered Amounts.

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This payment will reduce the Participant's future benefit payments under the Plan on an actuarial basis.

ARTICLE III

Lump Sum Election

This Article only applies with respect to Grandfathered Amounts. See Appendix A and Appendix B for the distribution rules that apply to other benefits earned under the Plan.

- 3.01 In General. This Article sets forth the rules under which Participants may elect to receive their benefits in a lump sum. Except as provided in Section 3.08, this Article does not apply to active employees (as defined in Section 3.04) in cases where benefits are automatically payable in lump sum form under Article II.
- 3.02 Retirees Election. Participants and Participants' beneficiaries already receiving monthly benefits under the Plan at its inception will be given a one-time opportunity to elect a lump sum payout of future benefit payments.
- (a) The election must be made within a 60-day period determined by the Company. Within its discretion, the Company may delay the commencement of the 60-day period in instances where the Company is unable to timely communicate with a particular payee.
  - (b) The determination as to whether a payee is already receiving monthly benefits will be made at the beginning of the 60-day period.
  - (c) An election to take a lump sum must be accompanied by a waiver of the existing retiree medical benefits by those Participants (and their covered spouses or surviving spouses) entitled either to have such benefits entirely paid for by the Company or to receive such benefits as a result of their classification as an employee under Executive Class Code II.  
Following the waiver, waiving Participants (and covered spouses or surviving spouses) will be entitled to the coverage offered to employees who are eligible for Senior Executive Retirement Insurance Benefits in effect as of July 1, 1993.
  - (d) If the person receiving payments as of the beginning of the 60-day period dies prior to making a lump sum election, his or her beneficiary, if any, may not make the lump sum election.
  - (e) Elections to receive a lump sum (and waivers under (c)) must be made in writing and must include spousal consent if the payee (whether the Participant or beneficiary) is married. Elections and spousal consent must be witnessed by a Plan representative or a notary public.

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- (f) An election (with spousal consent, where required) to receive the lump sum made at any time during the 60-day period will be irrevocable. If no proper election has been made by the end of the 60-day period, payments will continue unchanged in the monthly form that had previously been applicable.
- 3.03 Retirees Lump Sum. If a retired Participant or beneficiary makes a valid election under Section 3.02 within the 60-day period, monthly payments will continue in the previously applicable form for 12 months (assuming the payees live that long).
- (a) As of the first of the 13<sup>th</sup> month, the present value of the remaining benefit payments will be paid in a single lump sum to the Participant, if alive, or, if not, to the beneficiary under the previously applicable form of payment.
- (b) No lump sum payment will be made if:
- (1) The Participant is receiving monthly benefit payments in a form that does not provide for survivor benefits and the Participant dies before the time the lump sum payment is due.
  - (2) The Participant is receiving monthly benefit payments in a form that does provide for survivor benefits but the Participant and the beneficiary die before the time the lump sum payment is due.
- (c) The following rules apply where payment is being made in the form of a 10-year certain and continuous life annuity option:
- (1) If the Participant is deceased at the commencement of the 60-day election period, the surviving beneficiary may not make the election if there are less than 13 months left in the 10-year certain period.
  - (2) If the Participant elects the lump sum and dies prior to the first of the 13<sup>th</sup> month:
    - (A) if the 10-year certain period has already ended, all monthly payments will cease at the Participant's death and no lump sum payment will be made;
    - (B) if the 10-year certain period ends after the Participant's death and before the beginning of the 13<sup>th</sup> month, monthly payments will end at the end of the 10-year certain period and no lump sum payment will be made; and
    - (C) if the 10-year certain period ends after the beginning of the 13<sup>th</sup> month, monthly payments will continue through the 12<sup>th</sup> month, and a lump sum payment will be made as of the first of the 13<sup>th</sup> month, equal to the present value of the remaining benefit payments.



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3.04 Actives Election. Active Participants may elect to have their benefits paid in the form of a single lump sum under this Section.

- (a) A Participant is considered to be “Active” under this Section if he or she is still employed by the Affiliated Companies on or after the beginning of the initial 60-day period referred to in Section 3.02.
- (b) An election to take a lump sum may be made at any time during the 60-day period prior to Termination of Employment and covers both –
  - (1) Benefits payable to the Participant during his or her lifetime, and
  - (2) Survivor benefits (if any) payable to the Participant’s beneficiary, including preretirement death benefits (if any) payable to the Participant’s spouse.
- (c) An election does not become effective until the earlier of
  - (1) the Participant’s Termination of Employment, or
  - (2) the Participant’s death.

Before the election becomes effective, it may be revoked.

If a Participant does not have a Termination of Employment within 60 days after making an election, the election will never take effect.

- (d) An election may only be made once. If it fails to become effective after 60 days or is revoked before becoming effective, it cannot be made again at a later time.
- (e) After a Participant has a Termination of Employment, no election can be made.
- (f) If a Participant dies before making a lump sum election, his or her spouse may not make a lump sum election with respect to any benefits which may be due the spouse.
- (g) Elections to receive a lump sum must be made in writing and must include spousal consent if the Participant is married. Elections and spousal consent must be witnessed by a Plan representative or a notary public.

3.05 Actives Lump Sum – Retirement Eligible. If a Participant with a valid lump sum election in effect under Section 3.04 has a Termination of Employment after he or she is entitled to commence benefits under the Pension Plans, payments will be made in accordance with this Section.

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- (a) Monthly benefit payments will be made for up to 12 months, commencing the first of the month following Termination of Employment. Payments will be made:
- (1) in the case of a Participant who is not married on the date benefits are scheduled to commence, based on a straight life annuity for the Participant's life and ceasing upon the Participant's death should he or she die before the 12 months elapse, or
  - (2) in the case of a Participant who is married on the date benefits are scheduled to commence, based on a joint and survivor annuity form –
    - (A) with the survivor benefit equal to 50% of the Participant's benefit;
    - (B) with the Participant's spouse as the survivor annuitant;
    - (C) determined by using the contingent annuitant option factors used to convert straight life annuities to 50% joint and survivor annuities under the Northrop Retirement Plan; and
    - (D) with all payments ceasing upon the death of both the Participant and his or her spouse should they die before the 12 months elapse.
- (b) As of the first of the 13<sup>th</sup> month, the present value of the remaining benefit payments will be paid in a single lump sum. Payment of the lump sum will be made to the Participant if he or she is still alive, or, if not, to his or her surviving spouse, if any.
- (c) No lump sum payment will be made if:
- (1) The Participant is receiving monthly benefit payments in the form of a straight life annuity and the Participant dies before the time the lump sum payment is due.
  - (2) The Participant is receiving monthly benefit payments in a joint and survivor annuity form and the Participant and his or her spouse both die before the time the lump sum payment is due.
- (d) A lump sum will be payable to a Participant's spouse as of the first of the month following the date of the Participant's death, if:
- (1) the Participant dies after making a valid lump sum election but prior to commencement of any benefits under this Plan;
  - (2) the Participant is survived by a spouse who is entitled to a preretirement surviving spouse benefit under this Plan; and

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- (3) the spouse survives to the first of the month following the date of the Participant's death.
- 3.06 Actives Lump Sum – Not Retirement Eligible. If a Participant with a valid lump sum election in effect under Section 3.04, has a Termination of Employment before he or she is entitled to commence benefits under the Pension Plans, payments will be made in accordance with this Section.
- (a) No monthly benefit payments will be made.
- (b) Following Termination of Employment, a single lump sum payment of the benefit will be made on the first of the month following 12 months after the date of the Participant's Termination of Employment.
- (c) A lump sum will be payable to a Participant's spouse as of the first of the month following the date of the Participant's death, if:
- (1) the Participant dies after making a valid lump sum election but prior to commencement of any benefits under this Plan;
- (2) the Participant is survived by a spouse who is entitled to a preretirement surviving spouse benefit under this Plan; and
- (3) the spouse survives to the first of the month following the date of the Participant's death.
- (d) No lump sum payment will be made if the Participant is unmarried at the time of death and dies before the time the lump sum payment is due.
- 3.07 Lump Sums with CIC Severance Plan Election. A Participant who elects lump sum payments of all his or her nonqualified benefits under the CIC Plans is entitled to have his or her benefits paid as a lump sum calculated under the terms of the applicable CIC Plan. Otherwise, benefit payments are governed by the general provisions of this Article, which provide different rules for calculating the amount of lump sum payments.
- 3.08 Calculation of Lump Sum. The factors to be used in calculating the lump sum are as follows:
- Interest: Whichever of the following two rates that produces the smaller lump sum:
- (1) the discount rate used by the Company for purposes of Statement of Financial Accounting Standards No. 87 of the Financial Accounting Standards Board as disclosed in the Company's annual report to shareholders for the year end immediately preceding the date of distribution, or

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(2) the applicable interest rate that would be used to calculate a lump sum value for the benefit under the Pension Plans.

Mortality: the applicable mortality table that would be used to calculate a lump sum value for the benefit under the Northrop Grumman Retirement Plan.

Increase in Section 415 Limit: 4% per year.

Age: Age rounded to the nearest month on the date the lump sum is payable.

Variable Unit Values: Variable Unit Values are presumed not to increase for future periods after the date the lump sum is payable.

The annuity to be converted to a lump sum will be the remaining annuity currently payable to the Participant or his or her beneficiary at the time the lump sum is due.

For example, assume a Participant is receiving benefit payments in the form of a 50% joint and survivor annuity.

If the Participant and the survivor annuitant are both still alive at the time the lump sum payment is due, the present value calculation will be based on the remaining benefits that would be paid to both the Participant and the survivor in the annuity form.

If only the survivor is alive, the calculation will be based solely on the remaining 50% survivor benefits that would be paid to the survivor.

If only the Participant is alive, the calculation will be based solely on the remaining benefits that would be paid to the Participant.

In the case of a Participant who dies prior to commencement of benefits under this Plan so that only a preretirement surviving spouse benefit (if any) is payable, the lump sum will be based solely on the value of the preretirement surviving spouse benefit.

In the case of a lump-sum under Section 3.07 (related to lump sums with a CIC Severance Plan election), the lump-sum amount will be calculated as described in that section and the rules of this Section 3.08 are not used.

3.09 Spousal Consent. Spousal consent, as required for elections as described above, need not be obtained if the Company determines that there is no spouse or the spouse cannot be located.

#### ARTICLE IV

##### Miscellaneous

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4.01 Amendment and Plan Termination. The Company may, in its sole discretion, terminate, suspend or amend this Plan at any time or from time to time, in whole or in part for any reason. This includes the right to amend or eliminate any of the provisions of the Plan with respect to lump sum distributions, including any lump sum calculation factors, whether or not a Participant has already made a lump sum election. Notwithstanding the foregoing, no amendment or termination of the Plan shall reduce the amount of a Participant's accrued benefit under the Plan as of the date of such amendment or termination.

No amendment of the Plan shall apply to the Grandfathered Amounts, unless the amendment specifically provides that it applies to such amounts. The purpose of this restriction is to prevent a Plan amendment from resulting in an inadvertent "material modification" to the Grandfathered Amounts.

The Company may, in its sole discretion, seek reimbursement from the Pension Plans to the extent this Plan pays Pension Plan Benefits to which Participants were entitled to or became entitled to under the Pension Plans.

4.02 Not an Employment Agreement. Nothing contained in this Plan gives any Participant the right to be retained in the service of the Company, nor does it interfere with the right of the Company to discharge or otherwise deal with Participants without regard to the existence of this Plan.

4.03 Assignment of Benefits. A Participant, surviving spouse or beneficiary may not, either voluntarily or involuntarily, assign, anticipate, alienate, commute, sell, transfer, pledge or encumber any benefits to which he or she is or may become entitled under the Plan, nor may Plan benefits be subject to attachment or garnishment by any of their creditors or to legal process.

Notwithstanding the foregoing, all or a portion of a Participant's benefit may be paid to another person as specified in a domestic relations order that the plan administrator determines is qualified (a "Qualified Domestic Relations Order"). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

- (1) issued pursuant to a State's domestic relations law;
- (2) relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the Participant;
- (3) creates or recognizes the right of a spouse, former spouse, child or other dependent of the Participant to receive all or a portion of the Participant's benefits under the Plan; and
- (4) meets such other requirements established by the plan administrator.

The plan administrator shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the plan

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administrator may consider the rules applicable to “domestic relations orders” under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

- 4.04 Nonduplication of Benefits. This Section applies if, despite Section 4.03, with respect to any Participant (or his or her beneficiaries), the Company is required to make payments under this Plan to a person or entity other than the payees described in the Plan. In such a case, any amounts due the Participant (or his or her beneficiaries) under this Plan will be reduced by the actuarial value of the payments required to be made to such other person or entity.

Actuarial value will be determined using the factors and methodology described in Section 3.08 above (in the case of lump sums) and using the actuarial assumptions in the underlying Pension Plan in all other cases.

In dividing a Participant’s benefit between the Participant and another person or entity, consistent actuarial assumptions and methodologies will be used so that there is no increased actuarial cost to the Company.

- 4.05 Funding. Participants have the status of general unsecured creditors of the Company and the Plan constitutes a mere promise by the Company to make benefit payments in the future. The Company may, but need not, fund benefits under the Plan through a trust. If it does so, any trust created by the Company and any assets held by the trust to assist it in meeting its obligations under the Plan will conform to the terms of the model trust, as described in Internal Revenue Service Revenue Procedure 92-64, but only to the extent required by Internal Revenue Service Revenue Procedure 92-65. It is the intention of the Company and Participants that the Plan be unfunded for tax purposes and for purposes of Title I of ERISA.

Any funding of benefits under this Plan will be in the Company’s sole discretion. The Company may set and amend the terms under which it will fund and may cease to fund at any time.

- 4.06 Construction. The Company shall have full discretionary authority to determine eligibility and to construe and interpret the terms of the Plan, including the power to remedy possible ambiguities, inconsistencies or omissions.

- 4.07 Governing Law. This Plan shall be governed by the law of the State of California, except to the extent superseded by federal law.

- 4.08 Actions By Company and Claims Procedures. Any powers exercisable by the Company under the Plan shall be utilized by written resolution adopted by the Board of Directors or its delegate. The Board may by written resolution delegate any of the Company’s powers under the Plan and any such delegations may provide for subdelegations, also by written resolution.

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The Company's standardized "Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures" shall apply in handling claims and appeals under this Plan.

- 4.09 Plan Representatives. Those authorized to act as Plan representatives will be designated in writing by the Board of Directors or its delegate.
- 4.10 Number. The singular, where appearing in this Plan, will be deemed to include the plural, unless the context clearly indicates the contrary.
- 4.11 2001 Reorganization. Effective as of the 2001 Reorganization Date in (d), the corporate structure of Northrop Grumman Corporation and its affiliates was modified. Effective as of the Litton Acquisition Date in (e), Litton Industries, Inc. was acquired and became a subsidiary of the Northrop Grumman Corporation (the "Litton Acquisition").
- (a) The former Northrop Grumman Corporation was renamed Northrop Grumman Systems Corporation. It became a wholly-owned subsidiary of the new parent of the reorganized controlled group.
  - (b) The new parent corporation resulting from the restructuring is called Northrop Grumman Corporation. All references in this Plan to the former Northrop Grumman Corporation and its Board of Directors now refer to the new parent corporation bearing the same name and its Board of Directors.
  - (c) As of the 2001 Reorganization Date, the new Northrop Grumman Corporation became the sponsor of this Plan, and its Board of Directors assumed authority over this Plan.
  - (d) 2001 Reorganization Date. The date as of which the corporate restructuring described in (a) and (b) occurred.
  - (e) Litton Acquisition Date. The date as of which the conditions for the completion of the Litton Acquisition were satisfied in accordance with the "Amended and Restated Agreement and Plan of Merger Among Northrop Grumman Corporation, Litton Industries, Inc., NNG, Inc., and LII Acquisition Corp.
- 4.12 Liabilities Transferred to HII. Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. ("HII") to its shareholders on March 31, 2011 (the "HII Distribution Date"). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Plan and the liabilities for these participants' benefits under the Plan were transferred to HII. On and after the HII Distribution Date, the Company and the Plan, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Plan.

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IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard

Denise Peppard

Corporate Vice President and Chief Human Resources Officer



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## APPENDIX A – 2005-2007 TRANSITION RULES

This Appendix A provides the distribution rules that apply to the portion of benefits under the Plan subject to Code section 409A for Participants with benefit commencement dates after January 1, 2005 and before January 1, 2008.

- A.01 Election. Participants scheduled to commence payments during 2005 may elect to receive both pre-2005 benefit accruals and 2005 benefit accruals in any optional form of benefit available under the Plan as of December 31, 2004. Participants electing optional forms of benefits under this provision will commence payments on the Participant's selected benefit commencement date.
- A.02 2005 Commencements. Pursuant to IRS Notice 2005-1, Q&A-19 & Q&A-20, Participants commencing payments in 2005 from the Plan may elect a form of distribution from among those available under the Plan on December 31, 2004, and benefit payments shall begin at the time elected by the Participant.
- (a) Key Employees. A Key Employee Separating from Service on or after July 1, 2005, with Plan distributions subject to Code section 409A scheduled to be paid in 2006 and within six months of his date of Separation from Service, shall have such distributions delayed for six months from the Key Employee's date of Separation from Service. The delayed distributions shall be paid as a single sum with interest at the end of the six month period and Plan distributions will resume as scheduled at such time. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years). Alternatively, the Key Employee may elect under IRS Notice 2005-1, Q&A-20 to have such distributions accelerated and paid in 2005 without the interest adjustment, provided, such election is made in 2005.
- (b) Lump Sum Option. During 2005, a temporary immediate lump sum feature shall be available as follows:
- (i) In order to elect a lump sum payment pursuant to IRS Notice 2005-1, Q&A-20, a Participant must be an elected or appointed officer of the Company and eligible to commence payments under the underlying qualified pension plan on or after June 1, 2005 and on or before December 1, 2005;
  - (ii) The lump sum payment shall be made in 2005 as soon as feasible after the election; and
  - (iii) Interest and mortality assumptions and methodology for calculating lump sum amount shall be based on the Plan's procedures for calculating lump sums as of December 31, 2004.

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A.03 2006 and 2007 Commencements. Pursuant to IRS transition relief, for all benefit commencement dates in 2006 and 2007 (provided election is made in 2006 or 2007), distribution of Plan benefits subject to Code section 409A shall begin 12 months after the later of: (a) the Participant's benefit election date, or (b) the underlying qualified pension plan benefit commencement date (as specified in the Participant's benefit election form). Payments delayed during this 12-month period will be paid at the end of the period with interest. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years).

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**APPENDIX B – POST 2007  
DISTRIBUTION OF 409A AMOUNTS**

The provisions of this Appendix B shall apply only to the portion of benefits under the Plan that are subject to Code section 409A with benefit commencement dates on or after January 1, 2008. Distribution rules applicable to the Grandfathered Amounts are set forth in Articles II and III, and Appendix A addresses distributions of amounts subject to Code section 409A with benefit commencement dates after January 1, 2005 and prior to January 1, 2008.

- B.01 Time of Distribution. Subject to the special rules provided in this Appendix B, distributions to a Participant of his vested retirement benefit shall commence as of the Payment Date.
- B.02 Special Rule for Key Employees. If a Participant is a Key Employee and age 55 or older at his Separation from Service, distributions to the Participant shall commence on the first day of the seventh month following the date of his Separation from Service (or, if earlier, the date of the Participant's death). Amounts otherwise payable to the Participant during such period of delay shall be accumulated and paid on the first day of the seventh month following the Participant's Separation from Service, along with interest on the delayed payments. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such delay (i.e., the rate may change in the event the delay spans two calendar years).
- B.03 Forms of Distribution. Subject to the special rules provided in this Appendix B, a Participant's vested retirement benefit shall be distributed in the form of a single life annuity. However, a Participant may elect an optional form of benefit up until the Payment Date. The optional forms of payment are:
- (a) 50% joint and survivor annuity
  - (b) 75% joint and survivor annuity
  - (c) 100% joint and survivor annuity.

If a Participant is married on his Payment Date and elects a joint and survivor annuity, his survivor annuitant will be his spouse unless some other survivor annuitant is named with spousal consent. Spousal consent, to be effective, must be submitted in writing before the Payment Date and must be witnessed by a Plan representative or notary public. No spousal consent is necessary if the Company determines that there is no spouse or that the spouse cannot be found.

- B.04 Death. If a married Participant dies before the Payment Date, a death benefit will be payable to the Participant's spouse commencing 90 days after the Participant's death. The death benefit will be a single life annuity in an amount equal to the survivor portion of a Participant's vested retirement benefit based on a 100% joint and survivor annuity determined on the Participant's date of death. This

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benefit is also payable to a Participant's domestic partner who is properly registered with the Company in accordance with procedures established by the Company.

B.05 Actuarial Assumptions. Except as provided in Section B.06, all forms of payment under this Appendix B shall be actuarially equivalent life annuity forms of payment, and all conversions from one such form to another shall be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

B.06 Accelerated Lump Sum Payouts.

- (a) Post-2007 Separations. Notwithstanding the provisions of this Appendix B, for Participants who Separate from Service on or after January 1, 2008, if the present value of (a) the vested portion of a Participant's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date of his Separation from Service, is less than or equal to \$25,000, such benefit amount shall be distributed to the Participant (or his spouse or domestic partner, if applicable) in a lump sum payment. Subject to the special timing rule for Key Employees under Section B.02, the lump sum payment shall be made within 90 days after the first of the month coincident with or following the date of the Participant's Separation from Service.
- (b) Pre-2008 Separations. Notwithstanding the provisions of this Appendix B, for Participants who Separate from Service before January 1, 2008, if the present value of (a) the vested portion of a Participant's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date the Participant attains age 55, is less than or equal to \$25,000, such benefit amount shall be distributed to the Participant (or his spouse or domestic partner, if applicable) in a lump sum payment within 90 days after the first of the month coincident with or following the date the Participant attains age 55, but no earlier than January 1, 2008.
- (c) Conflicts of Interest. The present value of a Participant's vested retirement benefit shall also be payable in an immediate lump sum to the extent required under conflict of interest rules for government service and permissible under Code section 409A.
- (d) Present Value Calculation. The conversion of a Participant's retirement benefit into a lump sum payment and the present value calculations under this Section B.06 shall be based on the actuarial assumptions in effect under the Northrop

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Grumman Pension Plan for purposes of calculating lump sum amounts, and will be based on the Participant's immediate benefit if the Participant is 55 or older at Separation from Service. Otherwise, the calculation will be based on the benefit amount the Participant will be eligible to receive at age 55.

B.07 Effect of Early Taxation. If the Participant's benefits under the Plan are includible in income pursuant to Code section 409A, such benefits shall be distributed immediately to the Participant.

B.08 Permitted Delays. Notwithstanding the foregoing, any payment to a Participant under the Plan shall be delayed upon the Company's reasonable anticipation of one or more of the following events:

- (a) The Company's deduction with respect to such payment would be eliminated by application of Code section 162(m); or
- (b) The making of the payment would violate Federal securities laws or other applicable law;

provided, that any payment delayed pursuant to this Section B.08 shall be paid in accordance with Code section 409A.

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**APPENDIX C – COMMITTEES AND APPOINTMENTS**

Notwithstanding anything to the contrary in this Plan, effective October 25, 2011, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Article IV of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

**NORTHROP GRUMMAN SUPPLEMENTARY  
RETIREMENT INCOME PLAN**

Amended and Restated

Effective January 1, 2012

**1. Purpose.** The purpose of the Northrop Grumman Supplementary Retirement Income Plan (SRIP) is to provide supplemental retirement and death benefits to those:

(i) employees, including officers, of Northrop Grumman Space & Mission Systems Corp. and its subsidiaries (“NGSMSC”) whose benefits under the Northrop Grumman Space & Mission Systems Corp. Salaried Pension Plan (“SPP”) have been limited by virtue of §415 of the Internal Revenue Code of 1986 (“Code”);

(ii) management and highly-compensated employees of NGSMSC whose benefits under the SPP are limited by Code §401(a)(17);

(iii) management and highly-compensated employees of NGSMSC whose compensation otherwise included as pensionable earnings received by such individual within the meaning of the SPP could not be so included because such compensation was deferred in accordance with the provisions of the Northrop Grumman Space & Mission Systems Corp. Deferred Compensation Plan or the Northrop Grumman Deferred Compensation Plan (“DC Plan” or DC Plans”); and

(iv) management and highly-compensated employees of NGSMSC whose compensation otherwise included as “Earnings” under the SPP and service otherwise included as Benefit Service under the SPP would not be so included because of a determination by NGSMSC that such inclusion could violate the regulations under Code §401(a)(4).

The SRIP is unfunded for tax purposes and for purposes of Title I of the Employee Retirement Income Security Act (“ERISA”) and is designed to provide benefits which mirror the provisions of the SPP but cannot be paid from the SPP because of certain Code limitations.

The SRIP is hereby amended and restated effective as of January 1, 2012, except as otherwise provided. This restatement amends the January 1, 2010 restatement of the SRIP and includes changes that apply to Grandfathered Amounts (as defined below).

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The SRIP is intended to comply with Code section 409A and official guidance issued thereunder (except for SRIP benefits that were earned and vested as of December 31, 2004 within the meaning of Code section 409A and official guidance thereunder (“Grandfathered Amounts”). Notwithstanding any other provision of the SRIP, the SRIP shall be interpreted, operated and administered in a manner consistent with this intention.

**2. Eligibility.** Employees of NGSMSC covered by the SPP and not otherwise covered by the BDM International, Inc. Defined Contribution Supplemental Executive Retirement Plan (the “BDM DC SERP”) whose base pay and bonus paid in any year (or deferred pursuant to the DC Plan) exceed the limitations of Code §401(a)(17) shall automatically be covered under the SRIP. All SPP participants not otherwise covered by the BDM DC SERP who are eligible to receive benefits from the SPP shall automatically receive a benefit from the SRIP if their benefit cannot be fully provided under the SPP because of the limits under Code §415. In addition, Grandfathered Participants, as defined in Appendix C, shall remain eligible to participate in the SRIP on and after January 1, 2009 and shall continue to accrue benefits as set forth in Appendix C.

The foregoing notwithstanding, effective as of February 28, 2003, individuals who qualify as “TRW Automotive Participants” under the February 28, 2003 Employee Matters Agreement between Northrop Grumman Space & Mission Systems Corp. and TRW Automotive Acquisition Corp. cease to participate in the SRIP, and the SRIP and NGSMSC cease to be liable for TRW Automotive Participants’ benefits.

### **3. Benefits.**

a. In General. The amount of the benefit payable under the SRIP shall be equal to the amount which would be payable to or in respect of a participant under the SPP if the limitations identified in §1 above were inapplicable, less the amount of the benefit payable under the SPP, taking into account such limitations. The amount of benefit payable under the SRIP to a participant shall also be reduced to the extent that any other nonqualified plan established by NGSMSC or any other entity affiliated with NGSMSC under Code §414(b) or (c) (“Affiliate”) pays benefits to the participant that are attributable to limits imposed upon the SPP other than those identified in §1 above. The benefit payable under the SRIP for those participants who were participants in The BDM Corporation Supplemental Executive Retirement Plan which was merged into the SRIP (the “BDM SERP”) on the close of business on December 31, 1998 (the “Merger Effective Date”) will not be less than the benefit which had accrued under the BDM SERP as of the Merger Effective Date for such participants. Schedule A attached hereto sets forth the relevant provisions of the BDM SERP necessary to calculate such accrued benefits. The benefit payable under the SRIP for the sole participant who was a “Covered Executive” in the Astro



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Aerospace Corporation Supplemental Executive Retirement Plan (the "Astro SERP") on the close of business on November 30, 1999 will not be less than the benefit which had accrued under the Astro SERP as of November 30, 1999 for such participant, as determined in accordance with the terms of the Astro SERP as in effect on November 30, 1999 (a copy of which is attached hereto as Schedule B) and the benefit payable to such participant's spouse under the SRIP shall not be less than the benefit which would have been payable to such spouse under the terms of the Astro SERP had the participant died on November 30, 1999.

b. Benefit Limit. The amount of the SRIP benefit will be limited as provided below:

i. A participant's total accrued benefits under all defined benefit plans, programs, and arrangements maintained by Northrop Grumman Corporation and its affiliates (as determined under Code section 414) in which he or she participates, including the SRIP, may not exceed 60% of his or her Final Average Salary. If this limit is exceeded, the participant's benefit accrued under the SRIP will be reduced to the extent necessary to satisfy the limit.

(1) For this purpose, "Final Average Salary" has the meaning provided under Appendix G to the Northrop Grumman Supplemental Plan 2 (the "OSERP").

(2) The Participant's Final Average Salary will be reduced for early retirement applying the factors in the OSERP.

(3) The limit in this subsection may not be exceeded even after the benefits under the SRIP have been enhanced under any change in control agreements or Northrop Grumman Corporation Special Agreements.

c. Compensation. The following shall not be considered as compensation for purposes of determining the amount of any benefit under the SRIP:

i. Any payment authorized by the Compensation Committee of Northrop Grumman Corporation that is (i) calculated pursuant to the method for determining a bonus amount under the Northrop Grumman Corporation Annual Incentive Plan (AIP) for a given year, and (ii) paid in lieu of such bonus in the year prior to the year the bonus would otherwise be paid under the AIP, and

ii. Any award payment under the Northrop Grumman Long-Term Incentive Cash Plan.

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**4. Payment of Benefits.** The distribution rules of this Section 4 only apply to Grandfathered Amounts. See Appendix A and Appendix B for the rules that apply to other benefits earned under the SRIP.

a. Except as provided below, no benefit is payable from the SRIP, even if the participant has terminated his/her employment, unless a participant has five years of vesting service as defined under the SPP and has attained age fifty-five, provided, however, a benefit will be payable from the SRIP prior to a participant's attainment of age fifty-five if the participant terminates his or her employment in connection with (i) a special voluntary early retirement program offered under the SPP, the terms of which provide for eligibility prior to age fifty-five, or (ii) a special early commencement option under the SPP, the terms of which provide for commencement of the SPP benefit before age fifty-five.

b. If a participant who has five or more years of vesting service dies before his/her benefit commencement date under the SPP, the SRIP benefit shall be paid in the same form and shall commence at the same time as a pre-retirement survivor benefit under the SPP.

c. Except as provided in paragraph g., i., j., or as provided below, any participant in the SPP and the SRIP who is entitled to a vested or deferred vested pension under the SPP shall have his SRIP benefit (i) commence at the same time as his benefit commencement date under the SPP and (ii) paid in the same form and with the same designated joint annuitant, if any, as his form of payment under the SPP unless otherwise provided under the terms of any Qualified Domestic Relations Order (as defined in Section 5) applicable to said participant or unless otherwise determined by the Administrative Committee in its sole discretion. Any such participant who is eligible for the special early commencement option under the SPP may petition the Administrative Committee at any time at least two months prior to his severance from service date under the SPP to change such form of payment into a single sum or annual installments from two to ten years, or any other payment form approved by the Administrative Committee in their or its discretion. If annual installment payments are elected, interest, if any, on such installments shall be determined by the Actuary, subject to approval by the Administrative Committee. If a participant receiving installment payments dies, his remaining installment payments shall be made as scheduled to any properly designated beneficiary, or if none exists, in a single lump sum to the participant's estate.

d. Except as provided above or in paragraph g., i., or j., payment of benefits under the SRIP shall be made commencing with the January following the date the participant becomes eligible, having terminated his employment with NGSMSC and all Affiliates, for benefits under the SPP; provided, however, that if the participant's termination of employment is the result of a divestiture of the NGSMSC or Affiliate unit or operation where the participant worked prior to termination of employment and the participant obtains employment with the entity

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that acquired such unit or operations, then the SRIP benefit shall not be payable until such participant is eligible for and receives (or commences to receive) his SPP benefit (even if the SRIP benefit is less than \$5,000).

e. Except as provided above and in paragraph g., i., or j., the automatic form of benefit payable under the Plan shall be, for an unmarried participant, a single life annuity, and, for a married participant, a 50% joint and survivor annuity, with the participant's eligible spouse being the survivor annuitant. Notwithstanding the above, the participant may elect, by notice to the administrator for the SRIP, at any time at least two months prior to the severance from service date under the SPP (the "Severance from Service Date") to change such form of payment into a single sum or annual installments from two to ten years, or any other payment form approved by the Administrative Committee in its discretion. If annual installment payments are elected, interest, if any, on such installments shall be determined by the Actuary, subject to approval by the Administrative Committee. If a participant receiving installment payments dies, his remaining installment payments shall be made as scheduled to any properly designated beneficiary, or if none exists, in a single lump sum to the participant's estate.

f. If not rejected by the Administrative Committee at least 14 days prior to the Severance from Service Date, any election of a form of payment or benefit commencement date other than the automatic form and commencement date shall be irrevocable.

g. If the present value of a participant's interest in the SRIP, determined as of the later of the participant's age 55 or severance from service date under the SPP, is less than an amount which, if converted to a single sum equals \$5,000, the benefit shall be paid out in a single sum, either at the same time as his benefit commencement date under the SPP or at another date as determined by the Administrative Committee in its sole discretion. (See paragraph i for the rule that applies as of January 1, 2008.)

h. Payments to be made pursuant to the SRIP shall be made by NGSMSC, with any appropriate reimbursement being made by subsidiaries of NGSMSC. The SRIP shall be unfunded, and NGSMSC shall not be required to establish any special or separate fund nor to make any other segregation of assets in order to assure the payment of any amounts under the SRIP. Participants of the SRIP shall have the status of general unsecured creditors of NGSMSC and the SRIP constitutes a mere promise by NGSMSC to make benefit payments in the future.

i. Mandatory Cashout. Notwithstanding any other provisions in the SRIP, participants with Grandfathered Amounts who have not commenced payment of such benefits prior to January 1, 2008 will be subject to the following rules:

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i. Post-2007 Terminations. Participants who have a complete termination of employment with NGSMSC and the Affiliates after 2007 will receive a lump sum distribution of the present value of their Grandfathered Amounts within two months of such termination (without interest), if such present value is below the Code section 402(g) limit in effect at the termination.

ii. Pre-2008 Terminations. Participants who had a complete termination of employment with NGSMSC and the Affiliates before 2008 will receive a lump sum distribution of the present value of their Grandfathered Amounts within two months of the time they commence payment of their underlying qualified pension plan benefits (without interest), if such present value is below the Code section 402(g) limit in effect at the time such payments commence.

j. Optional Payment Forms. Participants with Grandfathered Amounts shall be permitted to elect i. or ii. below:

i. To receive their Grandfathered Amounts in any form of distribution available under the SRIP at October 3, 2004, provided that form remains available under the underlying qualified pension plan at the time payment of the Grandfathered Amounts commences. The conversion factors for these distribution forms will be based on the factors or basis in effect under the SRIP on October 3, 2004.

ii. To receive their Grandfathered Amounts in any life annuity form not included in i. above but included in the underlying qualified pension plan distribution options at the time payment of the Grandfathered Amounts commences. The conversion factors will be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

k. Special Tax Distribution. On the date a participant's retirement benefit is reasonably ascertainable within the meaning of IRS regulations under Code section 3121(v)(2), an amount equal to the participant's portion of the FICA tax withholding will be distributed in a single lump sum payment. This payment will be based on all benefits under the SRIP, including Grandfathered Amounts. This payment will reduce the participant's future benefit payments under the SRIP on an actuarial basis.

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**5. Non-Alienation of Benefits.** Neither a participant nor any other person shall have any right to sell, assign, transfer, pledge, mortgage or otherwise encumber, in advance of actual receipt, any SRIP benefit. Any such attempted assignment or transfer shall be ineffective; NGSMSC's sole obligation under the SRIP shall be to pay benefits to the participant, his beneficiary or his estate, as appropriate. No part of any SRIP benefit shall, prior to actual payment, be subject to the payment of any debts, judgments, alimony or separate maintenance owed by a participant or any other person; nor shall any SRIP benefit be transferable by operation of law in the event of a participant's or any other person's bankruptcy or insolvency, except as required or permitted by law.

Notwithstanding the foregoing, all or a portion of a participant's benefit may be paid to another person as specified in a domestic relations order that the plan administrator determines is qualified (a "Qualified Domestic Relations Order"). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

- a. Issued pursuant to a State's domestic relations law;
- b. Relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the participant;
- c. Creates or recognizes the right of a spouse, former spouse, child or other dependent of the participant to receive all or a portion of the participant's benefits under the SRIP; and
- d. Meets such other requirements established by the plan administrator.

The plan administrator shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the plan administrator may consider the rules applicable to "domestic relations orders" under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

## **6. Committees.**

a. An Administrative Committee and an Investment Committee (together, the "Committees"), each of one or more persons, shall be appointed by and serve at the pleasure of the board of directors of NGSMSC (the "Board"). The number of members comprising the Committees shall be determined by the Board, which may from time to time vary the number of members. A member of the Committees may resign by delivering a written notice of resignation to the Board. The Board may remove any member by delivering a certified copy of its

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resolution of removal to such member. Vacancies in the membership of the Committees shall be filled promptly by the Board.

b. i. Each Committee shall act at meetings by affirmative vote of a majority of the members of that Committee. Any determination of action of the Committees may be made or taken by a majority of a quorum present at any meeting thereof, or without a meeting, by resolution or written memorandum signed by a majority of the members of the Committees then in office. A member of the Committees shall not vote or act upon any matter which relates solely to himself or herself as a Participant. The Chairman or any other member or members of each Committee designated by the Chairman may execute any certificate or other written direction on behalf of the Committee of which he or she is a member.

ii. The Board shall appoint a Chairman from among the members of the Administrative Committee and a Secretary who may or may not be a member of the Administrative Committee. The members of the Investment Committee will elect one of their members as Chairman and will appoint a Secretary and any other officers as the Investment Committee may deem necessary. The Committees shall conduct their business according to the provisions of this Article and the rules contained in the current edition of Robert's Rules of Order or such other rules of order the Committees may deem appropriate. The Committees shall hold meetings from time to time in any convenient location.

c. The Administrative Committee shall enforce the SRIP in accordance with its terms, shall be charged with the general administration of the Plan, and shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

i. To construe and interpret the terms and provisions of the SRIP and make all factual determinations;

ii. To compute and certify to the amount and kind of benefits payable to participants and their beneficiaries;

iii. To maintain all records that may be necessary for the administration of the SRIP;

iv. To provide for the disclosure of all information and the filing or provision of all reports and statements to participants, beneficiaries or governmental agencies as shall be required by law;

v. To make and publish such rules for the regulation of the SRIP and procedures for the administration of the SRIP as are not inconsistent with the terms hereof;

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vi. To appoint a plan administrator or any other agent, and to delegate to them such powers and duties in connection with the administration of the SRIP as the Administrative Committee may from time to time prescribe (including the power to subdelegate);

vii. To exercise powers granted the Administrative Committee under other Sections of the SRIP; and

viii. To take all actions necessary for the administration of the SRIP, including determining whether to hold or discontinue insurance policies purchased in connection with the SRIP.

d. The Investment Committee shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

i. To oversee the rabbi trust, if any; and

ii. To appoint agents, and to delegate to them such powers and duties in connection with its duties as the Investment Committee may from time to time prescribe (including the power to subdelegate).

e. The Administrative Committee shall have full discretion to construe and interpret the terms and provisions of the SRIP, to make factual determinations and to remedy possible inconsistencies and omissions. The Administrative Committee's interpretations, constructions and remedies shall be final and binding on all parties, including but not limited to the Affiliates and any participant or beneficiary. The Administrative Committee shall administer such terms and provisions in a uniform and nondiscriminatory manner and in full accordance with any and all laws applicable to the SRIP.

f. To enable the Committees to perform their functions, the Affiliates adopting the SRIP shall supply full and timely information to the Committees on all matters relating to the compensation of all participants, their death or other events that cause termination of their participation in the SRIP, and such other pertinent facts as the Committees may require.

g. i. The members of the Committees shall serve without compensation for their services hereunder.

ii. Committees are authorized to employ such accounting, consultants or legal counsel as they may deem advisable to assist in the performance of their duties hereunder.

iii. To the extent permitted by ERISA and applicable state law, NGSMSC shall indemnify and hold harmless the Committees and each member

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thereof, the Board and any delegate of the Committees who is an employee of the Affiliates against any and all expenses, liabilities and claims, including legal fees to defend against such liabilities and claims arising out of their discharge in good faith of responsibilities under or incident to the SRIP, other than expenses and liabilities arising out of willful misconduct. This indemnity shall not preclude such further indemnities as may be available under insurance purchased by NGSMSC or provided by NGSMSC under any bylaw, agreement or otherwise, as such indemnities are permitted under ERISA and state law.



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## **7. Claims Procedure.**

The standardized “Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures” shall apply in handling claims and appeals under the SRIP.

**8. Amendment and Termination.** NGSMSC may, in its sole discretion, terminate, suspend or amend the SRIP at any time or from time to time, in whole or in part for any reason. This includes the right to amend or eliminate any of the provisions of the SRIP with respect to lump sum distributions, including any lump sum calculation factors, whether or not a participant has already made a lump sum election. Notwithstanding the foregoing, no amendment or termination of the SRIP shall reduce the amount of a participant’s accrued benefit under the SRIP as of the date of such amendment or termination.

No amendment of the SRIP shall apply to the Grandfathered Amounts, unless the amendment specifically provides that it applies to such amounts. The purpose of this restriction is to prevent a SRIP amendment from resulting in an inadvertent “material modification” to the Grandfathered Amounts.

## **9. Miscellaneous.**

a. As used herein, the masculine gender shall include the feminine gender. To the extent that any term is not defined under the SRIP, it shall have the same meaning as defined in the SPP.

b. Employment rights with NGSMSC shall not be enlarged or affected by the existence of the SRIP.

c. In case any provision of the SRIP shall be held illegal or invalid for any reason, said illegality or invalidity shall not affect the remaining provisions.

d. The SRIP shall be governed by the laws of the State of Ohio to the extent not preempted by ERISA.

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IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and Chief Human Resources Officer

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## APPENDIX A

### 2005-2007 TRANSITION RULES

This Appendix A provides the distribution rules that apply to the portion of benefits under the SRIP subject to Code section 409A for participants with benefit commencement dates after January 1, 2005 and before January 1, 2008.

A.1 Election. Participants scheduled to commence payments during 2005 may elect to receive both pre-2005 benefit accruals and 2005 benefit accruals in any optional form of benefit available under the SRIP as of December 31, 2004. Participants electing optional forms of benefits under this provision will commence payments on the participant's selected benefit commencement date.

A.2 2005 Commencements. Pursuant to IRS Notice 2005-1, Q&A-19 & Q&A-20, participants commencing payments in 2005 from the SRIP may elect a form of distribution from among those available under the SRIP on December 31, 2004, and benefit payments shall begin at the time elected by the participant.

a. Key Employees. A Key Employee Separating from Service on or after July 1, 2005, with SRIP distributions subject to Code section 409A scheduled to be paid in 2006 and within six months of his date of Separation from Service, shall have such distributions delayed for six months from the Key Employee's date of Separation from Service. The delayed distributions shall be paid as a single sum with interest at the end of the six month period and SRIP distributions will resume as scheduled at such time. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years). Alternatively, the Key Employee may elect under IRS Notice 2005-1, Q&A-20 to have such distributions accelerated and paid in 2005 without the interest adjustment, provided, such election is made in 2005.

For purposes of Appendix A and Appendix B, A "Key Employee" is an employee treated as a "specified employee" under Code section 409A(a)(2)(B)(i) of NGSMSC or an Affiliate (i.e., a key employee (as defined in Code section 416(i) without regard to paragraph (5) thereof) if NGSMSC's or an Affiliate's stock is publicly traded on an established securities market or otherwise. NGSMSC shall determine in accordance with a uniform NGSMSC policy which participants are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be used. Such

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determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

For purposes of Appendix A and Appendix B, "Separation from Service" or "Separates from Service" means a "separation from service" within the meaning of Code section 409A.

b. Lump Sum Option. During 2005, a temporary immediate lump sum feature shall be available as follows:

i. In order to elect a lump sum payment pursuant to IRS Notice 2005-1, Q&A-20, a participant must be an elected or appointed officer of NGSMSC and eligible to commence payments under the underlying qualified pension plan on or after June 1, 2005 and on or before December 1, 2005;

ii. The lump sum payment shall be made in 2005 as soon as feasible after the election; and

iii. Interest and mortality assumptions and methodology for calculating lump sum amount shall be based on the SRIP's procedures for calculating lump sums as of December 31, 2004.

A.3 2006 and 2007 Commencements. Pursuant to IRS transition relief, for all benefit commencement dates in 2006 and 2007 (provided election is made in 2006 or 2007), distribution of SRIP benefits subject to Code section 409A shall begin 12 months after the later of: (a) the participant's benefit election date, or (b) the underlying qualified pension plan benefit commencement date (as specified in the participant's benefit election form). Payments delayed during this 12-month period will be paid at the end of the period with interest. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years).

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## APPENDIX B

### POST 2007 DISTRIBUTION OF 409A AMOUNTS

The provisions of this Appendix B shall apply only to the portion of benefits under the SRIP that are subject to Code section 409A with benefit commencement dates on or after January 1, 2008. Distribution rules applicable to the Grandfathered Amounts are set forth in Section 4, and Appendix A addresses distributions of amounts subject to Code section 409A with benefit commencement dates after January 1, 2005 and prior to January 1, 2008.

B.1 Time of Distribution. Subject to the special rules provided in this Appendix B, distributions to a participant of his vested retirement benefit shall commence as of the 1st of the month coincident with or following the later of (a) the date the participant attains age 55, or (b) the date the participant Separates from Service ("Payment Date").

B.2 Special Rule for Key Employees. If a participant is a Key Employee and age 55 or older at his Separation from Service, distributions to the participant shall commence on the first day of the seventh month following the date of his Separation from Service (or, if earlier, the date of the participant's death). Amounts otherwise payable to the participant during such period of delay shall be accumulated and paid on the first day of the seventh month following the participant's Separation from Service, along with interest on the delayed payments. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such delay (i.e., the rate may change in the event the delay spans two calendar years).

B.3 Forms of Distribution. Subject to the special rules provided in this Appendix B, a participant's vested retirement benefit shall be distributed in the form of a single life annuity. However, a participant may elect an optional form of benefit up until the Payment Date. The optional forms of payment are:

- a. 50% joint and survivor annuity
- b. 75% joint and survivor annuity
- c. 100% joint and survivor annuity.

If a participant is married on his Payment Date and elects a joint and survivor annuity, his survivor annuitant will be his spouse unless some other survivor annuitant is named with spousal consent. Spousal consent, to be

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effective, must be submitted in writing before the Payment Date and must be witnessed by a SRIP representative or notary public. No spousal consent is necessary if NGSMSC determines that there is no spouse or that the spouse cannot be found.

B.4 Death. If a married participant dies before the Payment Date, a death benefit will be payable to the participant's spouse commencing 90 days after the participant's death. The death benefit will be a single life annuity in an amount equal to the survivor portion of a participant's vested retirement benefit based on a 100% joint and survivor annuity determined on the participant's date of death. This benefit is also payable to a participant's domestic partner who is properly registered with NGSMSC in accordance with procedures established by NGSMSC.

B.5 Actuarial Assumptions. Except as provided in Section B.6, all forms of payment under this Appendix B shall be actuarially equivalent life annuity forms of payment, and all conversions from one such form to another shall be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

B.6 Accelerated Lump Sum Payouts.

a. Post-2007 Separations. Notwithstanding the provisions of this Appendix B, for participants who Separate from Service on or after January 1, 2008, if the present value of (a) the vested portion of a participant's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date of his Separation from Service, is less than or equal to \$25,000, such benefit amount shall be distributed to the participant (or his spouse or domestic partner, if applicable) in a lump sum payment. Subject to the special timing rule for Key Employees under Section B.2, the lump sum payment shall be made within 90 days after the first of the month coincident with or following the date of the participant's Separation from Service.

b. Pre-2008 Separations. Notwithstanding the provisions of this Appendix B, for participants who Separate from Service before January 1, 2008, if the present value of (a) the vested portion of a participant's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on

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the first of the month coincident with or following the date the participant attains age 55, is less than or equal to \$25,000, such benefit amount shall be distributed to the participant (or his spouse or domestic partner, if applicable) in a lump sum payment within 90 days after the first of the month coincident with or following the date the participant attains age 55, but no earlier than January 1, 2008.

c. Conflicts of Interest. The present value of a participant's vested retirement benefit shall also be payable in an immediate lump sum to the extent required under conflict of interest rules for government service and permissible under Code section 409A.

d. Present Value Calculation. The conversion of a participant's retirement benefit into a lump sum payment and the present value calculations under this Section B.6 shall be based on the actuarial assumptions in effect under the Northrop Grumman Pension Plan for purposes of calculating lump sum amounts, and will be based on the participant's immediate benefit if the participant is 55 or older at Separation from Service. Otherwise, the calculation will be based on the benefit amount the participant will be eligible to receive at age 55.

B.7 Effect of Early Taxation. If the participant's benefits under the SRIP are includible in income pursuant to Code section 409A, such benefits shall be distributed immediately to the participant.

B.8 Permitted Delays. Notwithstanding the foregoing, any payment to a participant under the SRIP shall be delayed upon NGSMSC's reasonable anticipation of one or more of the following events:

- a. NGSMSC's deduction with respect to such payment would be eliminated by application of Code section 162(m); or
- b. The making of the payment would violate Federal securities laws or other applicable law;

provided, that any payment delayed pursuant to this Section B.8 shall be paid in accordance with Code section 409A.

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## APPENDIX C

### CUTTING EDGE OPTRONICS TRANSFER

The provisions of this Appendix C are intended to comply with Code section 409A, and to maintain the exempt status of the Grandfathered Amounts accrued by any employees of Cutting Edge Optronics. Each such employee with a Grandfathered Amount is referred to below as a "Grandfathered Participant".

C.1 Transferred Employees. Except for any Grandfathered Participants, the employees of Cutting Edge Optronics that would otherwise have been eligible to participate and accrue benefits under the SRIP prior to 2009 (the "Transferred Employees") shall cease to participate in the SRIP as of January 1, 2009 (the "Transfer Date").

C.2 Transferred Employee Benefits. Any benefits accrued by the Transferred Employees under the SRIP for services prior to the Transfer Date shall be transferred to and payable under the Litton Industries, Inc. Restoration Plan 2 ("LRP 2"). Such benefits will thus no longer be payable under the SRIP.

C.3 Grandfathered Participant Benefits. Each Grandfathered Participant shall remain eligible to participate in the SRIP after 2008. Subject to Section 3(b), the accrued benefits of a Grandfathered Participant under the SRIP shall equal the benefits accrued under the SRIP for services performed prior to 2009, plus the benefits that such Grandfathered Participant would otherwise have accrued and become vested in based on services performed after 2008 had he or she been eligible to participate in the LRP 2.



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**APPENDIX D**

**COMMITTEES AND APPOINTMENTS**

Notwithstanding anything to the contrary in this Plan, effective October 25, 2011, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Section 6 of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

**Article 2**

**BENEFITS**

2.1 Computation of Benefits.

a. Total Benefit Objective. Total retirement benefits from the Company, coupled with expected Social Security benefits, are designed to provide a level of income during retirement based on the Member's service and income while with the Company. The Benefit Objective (as determined on or prior to Normal Retirement Date) for a Member who retires on or after his/her Normal Retirement Date with 20 or more years of Benefit Service (Benefit Service accrues to age 65), is 45% of the Member's Average Annual Compensation for the five highest consecutive plan years of his/her employment with the Company. For Members who retire with less than 20 years of Benefit Service, the Benefit Objective is the amount calculated above reduced by multiplying that amount by a fraction the numerator of which is the number of years of Benefit Service and the denominator of which is 20. The Benefit Objective, as defined above, is intended to be met by unreduced retirement income (without any reductions associated with any payment option) from both the Company's Retirement Plan and Supplemental Executive Retirement Plan plus the unreduced Social Security Benefit (commencing as late as age 67).

b. Calculation of Benefits Under This Plan. The benefit payable under this Plan shall be equal to the Benefit Objective as stated in paragraph a. above, reduced, as applicable, by the factors and in accordance with the provisions set forth for such purposes in the Retirement Plan, (i) for commencement prior to Normal Retirement Date, (ii) for election of a form of payment other than life only to the Member, and (iii) upon death, less the Retirement Plan Benefit and the unreduced Social Security Benefit as stated in paragraph a. above. If the benefit payable under this plan according to the preceding sentence plus the Retirement Plan Benefit is less than the Target Benefit Amount, as hereinafter defined, the benefit payable under this Plan shall be equal to the Target Benefit Amount less the Retirement Plan Benefit. The Target Benefit Amount shall mean \$90,000, reduced, as applicable, by the factors and in accordance with the provisions set forth for such purposes in the Retirement Plan, (i) for commencement prior to Normal Retirement Date, (ii) for election of a form of payment other than life only to the Member, and (iii) upon death.

2.2 Form of Benefit Payments.

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The benefit payable to or on behalf of a Member as determined under Section 2.1 shall be paid in the same form, and to the same beneficiary, if any, as the Member's benefit under the Retirement Plan.

2.3 Time of Benefit Payments.

Benefits due under this Plan shall be paid coincident with the payment date of benefits under the Retirement Plan.

APPENDIX A  
ASTRO AEROSPACE CORPORATION  
SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

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ASTRO AEROSPACE CORPORATION  
SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

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ASTRO AEROSPACE CORPORATION  
SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN

INTRODUCTION

The purpose of this Supplemental Executive Retirement Plan (the “Plan”) is to provide a further means whereby Astro Aerospace Corporation (the “Corporation”) may afford financial security to a select group of Covered Executives of the Corporation, who render valuable services to the Corporation, constituting an important contribution toward its continued growth and success, by providing for additional future compensation so that such employees may be retained and their productive efforts encouraged, all as provided herein. Retirement Allowances under this Supplemental Executive Retirement Plan are in addition to benefits payable under the Astro Aerospace Corporation Employees’ Pension Plan and any other qualified retirement plan maintained by the Corporation.

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ARTICLE I

DEFINITIONS

(a) "Administrator" means the Corporation which shall be responsible for the administration of this Plan.

(b) "Astro Pension Plan" means the Astro Aerospace Corporation Employees' Pension Plan, as amended from time to time.

(c) "Affiliate" means a member of a controlled group of corporations, within the meaning of section 414(b) of the Internal Revenue Code ("Code"), which includes the Corporation; a trade or business (whether or not incorporated) which is in common control with the Corporation as determined in accordance with section 414(c) of the Code; or any organization which is a member of an affiliated service group, within the meaning of section 414(m) of the Code, which includes the Corporation, and any other organization required to be aggregated with the Corporation pursuant to section 414(o) of the Code.

(d) "Corporation" means Astro Aerospace Corporation.

(e) "Covered Executive" means a person who is a member of the Astro Pension Plan and who is designated by the board of directors of the Corporation as being eligible to receive a Retirement Allowance.

(f) "Covered Service" means, with respect to a Covered Executive, a number of years and completed months equal to his period of "Service" for purposes of the Astro Pension Plan. For purposes of this Plan, "Service", as defined under the Astro Pension Plan, shall include Service with the Corporation and its Affiliates. Covered Service shall not exceed 35 years.

(g) "Early Retirement Date" means retirement from employment with Corporation and all Affiliates after attaining age 55 with 10 years of Covered Service.

(h) "Effective Date" means September 1, 1993.

(i) "Final Average Earnings" shall have the meaning ascribed under the terms of the Spar Pension Plan except that it will not be subject to the compensation limitation imposed by Internal Revenue Code Section 401(a)(17).

(j) "Former Covered Executive" means a Covered Executive who is no longer an active Covered Executive of the Plan but who remains entitled to benefits under the Plan and is not yet receiving a Retirement Allowance.



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(k) "Normal Retirement Date" means retirement from employment with Corporation and all Affiliates after attaining age 65.

(l) "Postponed Retirement Date" means the actual retirement date of a Covered Executive who continues employment with the Corporation or any Affiliate beyond Normal Retirement Date.

(m) "Plan" means the plan to provide Retirement Allowances set forth herein and as amended from time to time, which shall be known as the Astro Aerospace Corporation Supplemental Executive Retirement Plan.

(n) "Plan Year" means the period January 1 to December 31.

(o) "Retired Executive" means a Covered Executive or Former Covered Executive who has retired and is receiving a Retirement Allowance under the Plan.

(p) "Retirement Allowance" means an amount payable to a Covered Executive, a Former Covered Executive or a Spouse under the terms of the Plan.

(q) "Spar Pension Plan" or "Registered Plan" means the Spar Aerospace Limited Pension Plan for Executive Employees, as amended from time to time.

(r) "Spar SERP" means the Spar Aerospace Limited Supplemental Executive Retirement Plan.

(s) "Spouse" means, with respect to a (Former) Covered Executive, that person to whom the (Former) Covered Executive is lawfully married at the relevant time.

(t) "Total and Permanent Disability" means a physical or mental condition which results in a Covered Executive being eligible to receive disability benefits under the federal Social Security program, or under any formal program of long-term disability insurance provided by the Corporation or its Affiliates.

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ARTICLE II

DESIGNATION OF COVERED EXECUTIVES

The Board of Directors of the Corporation ("Board") shall, from time to time, in its discretion, designate as Covered Executives, for the purposes of the Plan, individuals who are members of the Astro Pension Plan. Once an individual is designated as a Covered Executive, the Board shall notify such Covered Executive in writing of his designation and shall provide him with a copy of the Plan.

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ARTICLE III

RETIREMENT BENEFITS

**3.01 Retirement Allowance on Normal or Postponed Retirement Date.** A Covered Executive retiring on his Normal Retirement Date or on his Postponed Retirement Date shall be entitled to receive a monthly Retirement Allowance equal to the excess of:

(a)  $1/12 \times 2\% \times$  the Covered Executive's Final Average Earnings multiplied by his Covered Service; over

(b) The sum of the monthly benefits payable to the Covered Executive under the Astro Pension Plan and any other qualified retirement plan to the extent such benefits are attributable to contributions of the Corporation or its Affiliates on the Covered Executive's behalf, excluding employee deferrals and employer matching contributions under the Astro Aerospace Corporation 401(k) Savings Plan ("401(k) Plan").

The benefits payable or benefits that would be payable under (a) and (b) above shall be determined as follows:

(i) under the Astro Pension Plan (or any other defined benefit plan of the Corporation or its Affiliates in which the Covered Executive participates or participated) assuming a straight life annuity form of benefit; and

(ii) under any defined contribution plan of the Corporation or its Affiliates in which the Covered Executive participates or participated assuming the Covered Executive's account balance(s) attributable to contributions by the Corporation or its Affiliates (other than elective salary deferrals, other employee contributions, employer matching contributions and earnings thereon) is paid in the form of a single life annuity beginning on the date the payment of the Retirement Allowance commences.

When determining the amount of the Covered Executive's benefits in any plan, any such benefits paid out prior to the date on which the Retirement Allowance is determined (e.g., hardship withdrawals, payments pursuant to a qualified domestic relations order or other in-service withdrawal) shall be treated as if no such payment was made and shall be included in the calculation of (a) and (b) above in accordance with Section 3.05 herein.

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**3.02 Retirement Allowance on Early Retirement Date.** A Covered Executive who retires on an Early Retirement Date shall be entitled to receive a Retirement Allowance commencing on his Early Retirement Date calculated in accordance with Section 3.01 provided that:

(a) The amounts in Subsection 3.01(a) and 3.01(b) will be reduced to take into account the early receipt of the Retirement Allowance. The reduction will be calculated consistent with the actuarial reduction applied to the benefit under the Astro Pension Plan; and

(b) The benefits under the Astro Pension Plan and any other qualified retirement plan of the Corporation or its Affiliates will be determined according to the applicable terms of such plan(s) at the Early Retirement Date.

**3.03 Payment of Retirement Allowance.** Retirement Allowances shall be paid on the first day of each month commencing after the Covered Executive's Normal Retirement Date, Early Retirement Date or Postponed Retirement Date, as the case may be, and, subject to Section 3.04, ceasing with the 360th monthly payment or, if earlier, the payment made coincident with or immediately preceding the death of the Covered Executive.

**3.04 Retirement Allowance Payable to Surviving Spouse of a Covered Executive.** If a Covered Executive who has a Spouse at the date payment of his Retirement Allowance commences, dies after retirement but before receiving 360 monthly payments of his Retirement Allowance under the Plan, such Spouse is entitled to receive a monthly amount equal to 66 2/3% of the monthly amount paid to the Covered Executive in the month immediately preceding his date of death from the Plan.

This monthly amount is payable to the Spouse for the balance of the 360 payments or until the death of the Spouse, whichever occurs first.

**3.05 Deeming Rule.** If the benefits payable to a Covered Executive or his Spouse under the Astro Pension Plan or any other qualified plan of the Corporation or its Affiliates are (were):

(i) commuted at the election of the Covered Executive or his Spouse, or;

(ii) divided pursuant to a decree, order or judgment of a competent tribunal, or a written separation agreement, relating to a division of property between the Covered Executive and his Spouse or former Spouse in settlement of rights arising out of their marriage or other conjugal relationship, on or after the breakdown of the marriage or other relationship; for the purposes of calculating the amount of the Covered Executive's or the surviving Spouse's Retirement Allowance, the benefits payable under such plans shall be deemed to be equal to the amount of the benefit that would have been payable if such election to commute or such division of the benefits under the

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plans had not been made and payment of such benefits commenced at the same time as the Retirement Allowance.

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ARTICLE IV

TERMINATION OF SERVICE

**4.01 Termination Benefits.** A Covered Executive, who has been a member of the Astro Pension Plan for 24 continuous months and whose employment with the Corporation and its Affiliates is terminated for any reason other than retirement or death prior to his Normal Retirement Date, shall be entitled to a Retirement Allowance commencing, subject to Section 4.02, on his Normal Retirement Date. The Retirement Allowance shall be determined in accordance with section 3.01.

**4.02 Early Commencement of Deferred Retirement Allowance.** A Former Covered Executive who is entitled to a Retirement Allowance payable under the terms of Section 4.01 who has elected to receive Early Retirement benefits under the Astro Pension Plan will commence receipt of his Retirement Allowance prior to his Normal Retirement Date coincident with the commencement of benefit payments from the Astro Pension Plan provided that he attained the age of 55 and had ten (10) years of Covered Service on his date of termination. The Retirement Allowance payable from such date shall be reduced to take into account the early receipt of the Retirement Allowance. The reduction will be calculated consistent with the actuarial reduction which would be applied under the Astro Pension Plan for an Early Retirement.

**4.03 Applicable Provisions.** The provisions of Section 3.03 and 3.04 apply to Retirement Allowances paid under Article IV, with such wording changes as may be necessary. However, the provisions of Article V shall apply when a Former Covered Executive dies prior to commencement of his Retirement Allowance.

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ARTICLE V

DEATH BENEFITS

**5.01 Benefits on Covered Executive's Death Prior to Retirement.** If a Covered Executive dies prior to commencement of a Retirement Allowance, the person who is his Spouse at the date of his death shall be entitled to a monthly amount equal to the excess of:

(a) 66 2/3% of the amount in Subsection 3.01(a) of the Plan calculated at the date of the Covered Executive's death,

less

(b) an amount, if any, equal to the sum of the monthly survivor benefits from the Astro Pension Plan and any other qualified plan of the Corporation or Affiliate payable to the Spouse in the same month.

The actual benefits under the Astro Pension Plan and any other qualified plan of the Corporation or Affiliate will be determined according to the applicable terms of such plan(s) at the date of the Covered Executive's death and shall not include benefits attributable to the Covered Executive's salary deferrals or matching contributions and earnings thereon under the 401(k) Plan.

Payment of the Spouse's benefit will commence on the first day of the month following the Covered Executive's date of death.

This monthly amount is payable to the Spouse for 360 monthly payments or until the death of the Spouse, whichever occurs first.

**5.02 Benefits on a Former Covered Executive's Death Prior to Retirement.** If a Former Covered Executive dies prior to commencement of a Retirement Allowance, his Spouse at the date of death shall be entitled to receive a Retirement Allowance equal to the Retirement Allowance calculated in accordance with Section 5.01 provided that:

(a) The amounts in subsection 3.01 will be reduced to take into account the early receipt of the Retirement Allowance. The reduction will be calculated consistent with the actuarial reduction applied to the benefit under the Astro Pension Plan; and

(b) The actual benefits under the Astro Pension Plan and any other qualified plan of the Corporation or Affiliate will be determined according to the applicable terms

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of such plan(s) at the Former Covered Executive's date of termination of employment with the Corporation and its Affiliates.

Payment of the Spouse's benefit will commence on the later of (1) first day of the month following the Former Covered Executive's date of death, (2) the Annuity Starting Date (as defined under the Astro Pension) elected by the surviving Spouse, or (3) the first date the surviving Spouse receives payment of the death benefit under the Astro Pension Plan.

This monthly amount is payable to the Spouse for 360 monthly payments or until the death of the Spouse, whichever occurs first.



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ARTICLE VI

DISABILITY BENEFITS

**6.01 Disabled Covered Executives.** A Covered Executive who is receiving benefits under a long-term disability benefit plan designated by the Corporation shall continue to be a Covered Executive. Such Covered Executive's Covered Service shall continue to accrue during the covered disability. The Covered Executive's Final Average Earnings while on disability shall be deemed to be equal to the Final Average Earnings in effect immediately preceding the commencement of the disability.

If the disabled Covered Executive does not return to active employment with the Corporation or any Affiliate, he will be entitled to receive a Retirement Allowance commencing, subject to Section 6.02, on his Normal Retirement Date calculated in accordance with Section 3.01, based on his Final Average Earnings on his date of disability and his Covered Service at his Normal Retirement Date.

**6.02 Disability Retirement.** A Covered Executive who, while in the employ of the Corporation or any Affiliate and, prior to his Normal Retirement Date:

(1) incurs a Total and Permanent Disability;

(2) does not qualify or ceases to qualify for benefits under any salary continuance or long-term disability benefits plan designated by the Corporation, or any applicable Worker's Compensation legislation; and

(3) retires under the Astro Pension Plan;

will be entitled to receive a Retirement Allowance coincident with the commencement of the payment of his benefit under the Astro Pension Plan. Such Retirement Allowance shall be equal to the amount calculated in accordance with Section 3.02 based on his Final Average Earnings on his date of disability and his Covered Service at his date of retirement.

**6.03 Applicable Provisions.** The provisions of Sections 3.03 and 3.04 apply to Retirement Allowances paid under Article VI, with such wording changes as may be necessary. However, the provisions of Article V shall apply when a disabled Covered Executive dies prior to commencement of his Retirement Allowance.

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ARTICLE VII

ADMINISTRATION

The Corporation is the Administrator of the Plan. The Administrator shall be responsible for the general administration of the Plan and shall perform all administrative functions and shall interpret, construe and apply the Plan provisions in accordance with its terms. The Corporation as Administrator may establish, adopt or revise rules and regulations as it deems necessary or advisable for the administration of the Plan. The Corporation may consult with and rely upon the advice of such counsel, actuaries and other advisors as it shall see fit.

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ARTICLE VIII

AMENDMENT OR TERMINATION OF THE PLAN

It is the intention of the Corporation in establishing the Plan that it should operate to the indefinite future. The Corporation does however, reserve the sole right to terminate the Plan at any time. The Corporation further reserves the right in its sole discretion to amend the Plan in any respect; provided, however, that no such amendment that reduces the value of the benefits therefore accrued by the Covered Executive shall be effective unless the Covered Executive consents to such amendment in writing.

In the event of termination of the Plan, the value of the benefits accrued by the Covered Executive at the time of termination will be determined assuming the Astro Pension Plan and all other qualified retirement plans of the Corporation and its Affiliates are terminated at the same time. Any amendment or termination shall be made pursuant to a resolution of the Board of Directors of the Corporation and shall be effective as of the date specified in such resolution.

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ARTICLE IX

CLAIMS REVIEW PROCEDURE

**9.01 Denial of Benefits.** If a Retirement Allowance under the Plan is wholly or partially denied, notice of the decision shall be furnished to the Covered or Former Covered Executive or Spouse (claimant) as the case may be by the Administrator within a reasonable period of time after such decision is reached.

**9.02 Notice.** Any claimant who is denied a claim for Benefits shall be furnished written notice setting forth:

- (a) the specific reason or reasons for the denial;
- (b) specific reference to the pertinent provision of the Plan upon which the denial is based;
- (c) a description of any additional material or information necessary for the claimant to perfect the claim; and
- (d) an explanation of the claim review procedure under the Plan.

**9.03 Appeals Procedure.** In order that a claimant may appeal a denial of a claim, the claimant or the claimant's duly authorized representative may:

- (a) request a review by written application to the Administrator, or its designate, no later than 60 days after receipt by the claimant of written notification of denial of a claim;
- (b) review pertinent documents; and
- (c) submit issues and comments in writing.

**9.04 Review.** A decision on review of a denied claim shall be made not later than 60 days after receipt of a request for review, unless special circumstances require an extension of time for processing, in which case a decision shall be rendered within a reasonable period of time, but not later than 120 days after receipt of a request for review. The decision on review shall be in writing and shall include the specific reason(s) for the decision and the specific reference(s) to the pertinent provisions of the Plan on which the decision is based.

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ARTICLE X

GENERAL

**10.01 No Employment Rights.** Nothing herein shall constitute a contract of continuing employment or in any manner obligate the Corporation to continue the service of a Covered Executive, or obligate a Covered Executive to continue in the service of the Corporation, and nothing herein shall be construed as fixing or regulating the compensation paid to Covered Executive.

**10.02 No Claim Against the Company.** Neither a Covered Executive nor any other person shall acquire by reason of the Plan any right in or title to any assets, funds or property of the Corporation whatsoever including, without limiting the generality of the foregoing, any specific funds or assets which the Corporation, in its sole discretion, may set aside in anticipation of a liability hereunder. Any trust which is created in connection with this Plan or any agreement shall provide that the assets of the trust are subject to the claims of the Corporation's general creditors. A Covered Executive shall have only a Contractual right to the amounts, if any, payable hereunder unsecured by any asset of the Corporation.

**10.03 Incompetence.** If the Administrator determines that any person entitled to any payment hereunder is incompetent by reason of any physical or mental disability, and consequently unable to give a valid receipt, the Administrator may cause any payment due to such person to be made to another person for his benefit, without responsibility on the part of the Administrator to follow the application of such funds. Payment made pursuant to this section 10.03 shall operate as a complete discharge of the responsibility of the Administrator.

**10.04 Nonassignability.** Neither a Covered Executive nor any other person shall have any right to commute, sell, assign, transfer, pledge, anticipate, mortgage or otherwise encumber, transfer, hypothecate or convey in advance of actual receipt the amounts, if any, payable hereunder, or any part thereof, which are, and all rights to which are, expressly declared to be unassignable and non-transferable. No part of the amounts payable shall, prior to actual payment, be subject to seizure or sequestration for the payment of any debts, judgments, alimony or separate maintenance owed by a Covered Executive or any other person, nor be transferable by operation of law in the event of a Covered Executive's or any other person's bankruptcy or insolvency.

**10.05 Continuance of Payments.** The payment of a Retirement Allowance to a Covered Executive or Former Covered Executive, or to his surviving Spouse, is subject to satisfactory proof of the existence of

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a Covered Executive or Former Covered Executive, or his surviving Spouse, as the case may be, as may be required from time to time by the Administrator.

**10.06 Notice.** Any notice required or permitted to be given to the Administrator of the Plan shall be sufficient if in writing and hand delivered, or sent by registered or certified mail, to the principal office of the Corporation, directed to the attention of the Administrator. Such notice shall be deemed given as of the date of delivery or, if delivery is made by mail, as of the date shown on the postmark or on the receipt for registration or certification.

**10.07 Gender and Number.** Wherever appropriate herein, the masculine may mean the feminine and the singular may mean the plural or vice versa.

**10.08 Corporate Successors.** The Plan shall not be automatically terminated by a transfer or sale of assets of the Corporation or the merger or consolidation of the Corporation into or with any other corporation or other entity, but the Plan shall be continued after such sale, merger or consolidation only if and to the extent that the transferee, purchaser or successor entity agrees to continue the Plan. In the event that the Plan is not continued by the transferee, purchaser or successor entity, then the Plan shall terminate subject to the provisions of Article VIII.

**10.09 Unclaimed Benefits.** Each Covered Executive shall keep the Corporation informed of his current address and the current address of his Spouse. The Corporation shall not be obligated to search for the whereabouts of any person. If the location of a Covered Executive is not made known to the Corporation within three (3) years after the date on which payment of the Covered Executive's Retirement Allowance may first be made, payment may be made as though the Covered Executive had died at the end of the three-year period. If, within one additional year after such three-year period has elapsed, or, within three years after the actual death of a Covered Executive, the Corporation is able to locate any surviving Spouse of the Covered Executive, then the Corporation shall have no further obligation to pay any benefit hereunder to such Covered Executive or surviving Spouse or any other person and such benefit shall be irrevocably forfeited.

**10.10 Withholding; Employment Taxes.** To the extent required by the law in effect at the time payments are made, the Corporation shall withhold from payments made hereunder any taxes required to be withheld by the Federal or any state or local government.

**10.11 Validity.** In the event any provision of this Plan is held invalid, void or unenforceable, the same shall not affect, in any respect whatsoever, the validity of any other provision of this Plan.

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**10.12 Applicable Law.** This Plan shall be governed and construed in accordance with the laws of the State of California.

NORTHROP GRUMMAN  
ELECTRONIC SYSTEMS EXECUTIVE PENSION PLAN  
(Amended and Restated Effective as of January 1, 2012)



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NORTHROP GRUMMAN

ELECTRONIC SYSTEMS EXECUTIVE PENSION PLAN

(Amended and Restated Effective as of January 1, 2012)

The Northrop Grumman Electronic Systems Executive Pension Plan (the "Plan") is hereby amended and restated effective as of January 1, 2012, except as otherwise provided. This restatement of the Plan amends the January 1, 2011 restatement and includes changes that apply to Grandfathered Amounts.

The Plan is intended to comply with Code section 409A and official guidance issued thereunder (except for Grandfathered Amounts). Notwithstanding any other provision of this Plan, this Plan shall be interpreted, operated and administered in a manner consistent with this intention.

Effective as of December 31, 2014, the accrued benefits for all Executives under this Plan shall be frozen. An Executive's benefit under this Plan will be based on his Executive Benefit Service and his Average Annual Compensation as of December 31, 2014, or at such earlier date that the Participant ceases to be eligible for this Plan, less the applicable offsets, determined on December 31, 2014, or such earlier applicable date. An Executive's service after December 31, 2014 will be considered for purposes of his eligibility, his vesting status, his early retirement eligibility, and calculating the early retirement reductions related to his frozen benefit.

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ARTICLE 1

Introduction

Section 1.01. Introduction. The Northrop Grumman Electronic Systems Executive Pension Plan is a supplemental pension plan that provides nonqualified deferred compensation for a select group of management or highly compensated employees.

Section 1.02. Effective Date. The Plan became effective March 1, 1996.

Section 1.03. Sponsor. The Plan sponsor is Northrop Grumman Corporation.

Section 1.04. Predecessor Plan. The Plan was established as a successor to the Westinghouse Executive Pension Plan, maintained by Westinghouse Electric Corporation ("Westinghouse") for the benefit of certain executive employees of the Westinghouse Electronic Systems Group as of February 29, 1996 who became employees of the Northrop Grumman Electronic Sensors & Systems Division as of March 1, 1996 as a result of the Westinghouse Acquisition, and certain other executive employees who may become employed by the Northrop Grumman Electronic Sensors & Systems Division on or after March 1, 1996. The Northrop Grumman Electronic Sensors & Systems Division became the Northrop Grumman Electronic Sensors & Systems Sector effective August 24, 1998.

Section 1.05. 2001 Reorganization. Effective as of the 2001 Reorganization Date in (d), the corporate structure of Northrop Grumman Corporation and its affiliates was modified. Effective as of the Litton Acquisition Date in (e), Litton Industries, Inc. was acquired and became a subsidiary of the Northrop Grumman Corporation (the "Litton Acquisition").

(a) The former Northrop Grumman Corporation was renamed Northrop Grumman Systems Corporation. It became a wholly-owned subsidiary of the new parent of the reorganized controlled group.

(b) The new parent corporation resulting from the restructuring is called Northrop Grumman Corporation. All references in this Plan to the former Northrop Grumman Corporation and its Board of Directors now refer to the new parent corporation bearing the same name and its Board of Directors.

(c) As of the 2001 Reorganization Date, the new Northrop Grumman Corporation became the sponsor of this Plan, and its Board of Directors assumed authority over this Plan.

(d) 2001 Reorganization Date. The date as of which the corporate restructuring described in (a) and (b) occurred.

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(e) Litton Acquisition Date. The date as of which the conditions for the completion of the Litton Acquisition were satisfied in accordance with the Amended and Restated Agreement and Plan of Merger Among Northrop Grumman Corporation, Litton Industries, Inc., NNG, Inc., and LII Acquisition Corp.

## ARTICLE 2

### Definitions

Capitalized terms which are defined in the ES Pension Plan will have the same meanings in this Plan unless otherwise expressly stated. In addition, the following terms when used and capitalized will have the following meanings:

Section 2.01. Affiliated Companies. The Company and any other entity related to the Company under the rules of section 414 of the Code. The Affiliated Companies include Northrop Grumman Corporation and its 80%-owned subsidiaries and may include other entities as well.

Section 2.02. Annual Incentive Programs. See Article 6.

Section 2.03. Average Annual Compensation. See Article 6.

Section 2.04. Board. Board means the Board of Directors of Northrop Grumman Corporation, or its delegate.

Section 2.05. Code. The Internal Revenue Code of 1986, as amended, and as it may be amended.

Section 2.06. Committee. A committee of not less than three members appointed by the Board with responsibility for the general administration of the Plan. The Committee is the "plan administrator" under ERISA.

Section 2.07. Company. Northrop Grumman Corporation.

Section 2.08. Defined Contribution Plan. A defined contribution plan within the meaning of ERISA § 3(34), but not including:

- (a) the Northrop Grumman Electronic Systems Savings Program or any similar program of a Participating Company or a Designated Entity or
- (b) any amount received pursuant to a cash or deferred arrangement (as that term is defined in the Code) maintained by a Participating Company or a Designated Entity.

Section 2.09. Designated Entity. Designated Entity means an Affiliated Company or other entity that has been and is still designated by the Committee as participating in the Plan.

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Section 2.10. ERISA. The Employee Retirement Income Security Act of 1974, as amended, and as it may be amended.

Section 2.11. ES Pension Plan. The Northrop Grumman Electronic Systems Pension Plan, formerly known as the ESSD Pension Plan.

Section 2.12. Executive. Executive means an individual who satisfies (a) and (b) and is not excluded by (c) or (d):

(a) An Employee who is employed by ES (or by a Participating Company, Designated Entity, or other Affiliated Company) in a position that is determined by the Company's Chief Executive Officer or Vice President and Chief Human Resources and Administrative Officer to be eligible as an Executive position under this Plan based on the duties and responsibilities of the position.

(b) The Employee has been notified by the Committee in writing that he or she is eligible for benefits under the Plan.

(c) No Employee may receive benefits under this Plan if he or she is currently accruing supplemental benefits under any other nonqualified deferred compensation plan, contract, or arrangement maintained by the Affiliated Companies or to which the Affiliated Companies contribute with the exception of the Officers Supplemental Executive Retirement Program under the Northrop Grumman Supplemental Plan 2.

(d) Notwithstanding any provision of the Plan to the contrary, effective as of July 1, 2003, no Employee will first become eligible to participate in the Plan or otherwise receive credit for service or compensation for purposes of calculating a benefit under the Plan unless the Employee was classified as an Executive eligible to participate in the Plan before that date. Executives that terminate employment and are later rehired into positions that are determined to be eligible as Executive positions under the Plan will be eligible to resume participation in the Plan and will be subject to Appendix B.

Section 2.13. Executive Benefit Service. See Article 6.

Section 2.14. Executive Pension Base. See Article 6.

Section 2.15. Executive Pension Supplement. The pension calculated pursuant to Articles 4 and 5 of this Plan. There will be no Executive Pension Supplement payable if the Executive's Qualified Plan Benefit equals or exceeds his or her Executive Pension Base.



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Section 2.16. Grandfathered Amounts. Plan benefits that were earned and vested as of December 31, 2004 within the meaning of Code section 409A and official guidance thereunder.

Section 2.17. Key Employee. An employee treated as a “specified employee” under Code section 409A(a)(2)(B)(i) of the Company or the Affiliated Companies (i.e., a key employee (as defined in Code section 416(i) without regard to paragraph (5) thereof)) if the Company’s or an Affiliated Company’s stock is publicly traded on an established securities market or otherwise. The Company shall determine in accordance with a uniform Company policy which Executives are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be used. Such determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

Section 2.18. Maximum Contribution. An Employee will be deemed to have made the Maximum Contribution if he or she has made the contributions under (a) and (b), as interpreted under (c):

(a) During such time as the Employee was eligible to participate in the ES Pension Plan and the Westinghouse Pension Plan, he or she contributed the maximum amount the Employee was permitted to contribute under those plans, and

(b) During such time as the Employee was employed by a Designated Entity (which includes for this purpose a “Designated Entity” under the Westinghouse Plan during periods before the Westinghouse Acquisition),

(1) The Employee contributed the maximum amount he or she was permitted to contribute, if any, to that Designated Entity’s defined benefit pension or Defined Contribution Plan, if any, and

(2) The Employee paid to the Company (or to Westinghouse, before the Westinghouse Acquisition) an amount of each of his or her annual incentive compensation awards based on the maximum ES Pension Plan contribution formula (or Westinghouse Pension Plan contribution formula, as appropriate) applied to 50% of his or her awards. This payment is pre-tax and is made by a deferral election entered into prior to the year in which the annual incentive compensation award is determined and paid.

(c) This Plan is intended as essentially a continuation of the Westinghouse Plan (see Appendix C). Accordingly, this Section is to be interpreted as requiring an Executive to have made the Maximum Contribution not only under this Plan but also under the Westinghouse Plan.

Section 2.19. Participating Company. Any of the “Participating Companies” under the ES Pension Plan.

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Section 2.20. Payment Date. The 1st of the month coincident with or following the later of (a) the date the Executive attains age 55, or (b) the date the Executive Separates from Service.

Section 2.21. Pension Plan and Pension Plans. Any of the following:

- (a) The Northrop Grumman Retirement Plan
- (b) The Northrop Grumman Retirement Plan – Rolling Meadows Site
- (c) The Northrop Grumman Retirement Value Plan (effective as of January 1, 2000)
- (d) The Northrop Grumman Electronics Systems – Space Division Salaried Employees’ Pension Plan (effective as of the Aerojet Closing Date)
- (e) The Northrop Grumman Electronics Systems – Space Division Union Employees’ Pension Plan (effective as of the Aerojet Closing Date)

“Aerojet Closing Date” means the Closing Date specified in the April 19, 2001 Asset Purchase Agreement by and Between Aerojet-General Corporation and Northrop Grumman Systems Corporation.

Section 2.22. Plan. The Northrop Grumman Electronic Systems Executive Pension Plan.

Section 2.23. Qualified Plan Benefit.

(a) The Qualified Plan Benefit is equal to the sum of:

- (1) the annual amount of pension the Executive has accrued under the ES Pension Plan and any applicable defined benefit pension plan of a Designated Entity based on Benefit Service accumulated up to the earlier of the Executive’s actual retirement date or death;
- (2) the amount the Executive is entitled to receive on a life annuity basis for retirement under any applicable Defined Contribution Plan of a Designated Entity;
- (3) in any case where service included in the Executive’s Vesting Service also entitles that Executive to benefits under one or more retirement plans (whether a defined benefit or Defined Contribution Plan or both) of another company, the amount the Executive is entitled to receive on a life annuity basis for retirement from those plans; and

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- (4) the amount of any “Qualified Plan Benefits” taken into account under the Westinghouse Plan (or which would have been taken into account, but for the Westinghouse Acquisition) with respect to plans that were not acquired by the Affiliated Companies as part of the Westinghouse Acquisition;

provided, the method of benefit measurement, in the case of (2), (3) and (4) above, will be on the basis of procedures determined by the Committee on a plan-by-plan basis.

(b) The Qualified Plan Benefit does not include any early pension retirement supplement.

(c) The term Qualified Plan Benefit will also include amounts accrued under an excess benefit plan or other similar arrangement in which the Executive is a participant.

Section 2.24. Retirement Eligible. An Executive is Retirement Eligible if he or she is accruing Vesting Service and:

- (a) has attained age 65 and completed five or more years of Vesting Service;
- (b) has attained age 60 and completed 10 or more years of Vesting Service;
- (c) has attained age 58 and completed 30 or more years of Vesting Service; or
- (d) has satisfied the requirements for an immediate pension under the Special Retirement Benefit provisions of the ES Pension Plan.

Section 2.25. Separation from Service or Separates from Service. A “separation from service” within the meaning of Code section 409A.

Section 2.26. Westinghouse. Westinghouse Electric Corporation.

Section 2.27. Westinghouse Acquisition. The acquisition by Northrop Grumman Corporation of the Electronic Systems Group of Westinghouse effective March 1, 1996.

Section 2.28. Westinghouse Plan. The Westinghouse Executive Pension Plan, as it existed from time to time.

### ARTICLE 3

#### Qualification for Benefits; Mandatory Retirement

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Section 3.01. Qualification for Benefits. Subject to Article 8 and other applicable provisions of the Plan, if any, each Executive will be entitled to the benefits of this Plan on separation from service from a Participating Company, a Designated Entity, or any other Affiliated Company, provided that such Executive meets the following four conditions:

(a) He or she has been employed in a position that meets the definition of Executive for five or more continuous years immediately preceding the earlier of the Executive's actual retirement date or the Executive's Normal Retirement Date. For purposes of this five-year requirement (but not for purposes of determining Executive Benefit Service under Section 6.05), the General Manager of ES and the Vice President of Human Resources for ES may determine that one or more years of an Employee's service with an Affiliated Company prior to the Employee's transfer to ES shall be counted as having been in an Executive position.

(b) He or she has made the Maximum Contribution during each year of Vesting Service from the date he or she first became an Executive until the earliest of his or her date of death, actual retirement date or Normal Retirement Date;

(c) He or she is a participant in the ES Pension Plan or in the defined benefit plan or Defined Contribution Plan of a Designated Entity, if any;

(d) He or she is Retirement Eligible on the date of voluntary or involuntary separation from service from a Participating Company or a Designated Entity or, in the case of a Surviving Spouse benefit, satisfies the requirements for benefits under Article 5 of the Plan.

An Executive who meets the following requirements will be treated as "Retirement Eligible" even though not meeting the Plan's definition of this term:

(1) The Executive is involuntarily terminated without cause, or terminated due to a divestiture of his business unit on or after December 1, 2010,

(2) The Executive has attained age 53 with 10 or more years of Early Retirement Eligibility Service, or 75 points (age plus Years of Credited Service) at date of termination, and

(3) The Executive is actively accruing benefits at date of termination and has satisfied both the rule of Section 3.01(a) and the rule of Section 3.01(b) on the date of termination.

Benefits that become payable based on the Executive's termination meeting the three requirements above shall be subject to Code Section 409A and payable in accordance with the terms of Appendix E. Reduction factors will apply in cases where benefit payments commence prior to age 58 (if the Executive has 30 or more years of Vesting Service) or age 60 (if the Executive has 10 - 29 years of Vesting Service). The reduction will be an actuarial one from age 58 or 60 (whichever age applies) to the actual payment commencement date. The reduction factor will be based on the actuarial assumptions used for determining lump sum actuarial equivalents in the Northrop Grumman Cash Balance Plan Program.

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Section 3.02. Mandatory Retirement. Pursuant to this Plan, the Company will be entitled, at its option, to retire any Executive who has attained age 65 and who, for the two-year period immediately before his or her retirement, has participated in this Plan, if such Executive is entitled to an immediate nonforfeitable annual retirement benefit from a pension, profit-sharing, savings or deferred compensation plan, or any combination of such plans, of a Participating Company or any Affiliated Company, which equals, in the aggregate, at least \$44,000. The calculation of the \$44,000 (or greater) amount will be performed in a manner consistent with 29 U.S.C. § 631(c)(2).

Section 3.03. Certain Transfers. Except as otherwise provided in (e) below, if an Executive transfers to a position with an Affiliated Company that is not covered by a Participating Company or Designated Entity:

(a) He or she will immediately cease to accrue Executive Benefit Service.

(b) He or she will continue to earn Vesting Service (for purposes of the Plan other than Executive Benefit Service) for periods of employment with the Affiliated Company.

(c) His or her Average Annual Compensation will include earnings as an employee from the Affiliated Company for periods after the transfer until his or her termination of employment with all Affiliated Companies.

(d) He or she may receive benefits under the Plan if he or she subsequently retires from the Company and satisfies the Plan's eligibility requirements.

(e) Effective as of July 1, 2003, if an Executive transfers to a position with an Affiliated Company that has been determined by the Company's Chief Executive Officer or Vice President and Chief Human Resources and Administrative Officer to be an eligible position under the Plan, (a)-(d) above will not apply and the Executive will continue to be classified as an active participant for all purposes under the Plan until the Executive's separation from service from all Affiliated Companies.

#### ARTICLE 4

##### Calculation of Executive Pension Supplement

Section 4.01. In General. The Executive Pension Supplement for an Executive who meets the qualifications of Article 3 of the Plan retiring on an Early, Normal or Special Retirement Date will be calculated as described in Section 4.02(a) or (b).

Section 4.02. Amount.

(a) If the Executive

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(1) has attained age 60 and completed 10 or more years of Vesting Service,

(2) has attained age 65, or

(3) has satisfied the eligibility requirements for an immediate pension under the “Special Retirement Benefit” provisions of the ES Pension Plan, the Executive Pension Supplement is determined by subtracting the Executive’s Qualified Plan Benefit that would be payable if he or she elected a Life Annuity Option (after any reduction for early retirement, if applicable) from his or her Executive Pension Base.

(b) If the Executive has not met the requirements of paragraph (a) above but has attained age 58 and completed 30 or more years of Vesting Service, the Executive Pension Supplement is determined by subtracting the Executive’s Qualified Plan Benefit that would be payable if he or she elected a Life Annuity Option (before any reduction for retirement prior to age 60) from his or her Executive Pension Base.

(c) If the Executive has not met the requirements of paragraph (a) or (b) above but is deemed to be Retirement Eligible under Section 3.01(d) based on the circumstances of the Executive’s termination, the Executive Pension Supplement is determined by subtracting the Executive’s Qualified Plan Benefit projected to age 60 as a Life Annuity from his or her Executive Pension Base.

## ARTICLE 5

### Death in Active Service

Section 5.01. Eligibility For an Immediate Benefit. If an Executive dies in active service and, on his or her date of death, satisfies the requirements of the “Special Surviving Spouse Benefit” under the ES Pension Plan and satisfied the requirements of Section 3.01(b) and (c) of this Plan at the time of death, a Surviving Spouse benefit will also be payable under this Plan if his or her Executive Pension Base exceeds his or her Qualified Plan Benefit. The requirement of Section 3.01(a) is waived.

Section 5.02. Calculation of Immediate Benefit. The amount of the immediate Surviving Spouse benefit under Section 5.01 will be the Executive Pension Supplement reduced in the same manner as though the benefit were a “Special Surviving Spouse Benefit” under the ES Pension Plan. For purposes of this Section, the Executive Pension Supplement will be calculated as follows:

(a) If the Executive had attained age 60 or if the Executive had completed 30 years of Vesting Service, the Executive Pension Supplement would be calculated as described in Section 4.02(a);

(b) Otherwise, the Executive Pension Supplement would be 80% of the difference between the Executive Pension Base and the unreduced Qualified Plan Benefit.

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Section 5.03. Eligibility For a Deferred Benefit. If an Executive dies in active service who does not satisfy the requirements of Section 5.01 but who satisfies the requirements of the "Surviving Spouse Benefit" under the ES Pension Plan and satisfied the requirements of Section 3.01(b) and (c) of this Plan at the time of death, a Surviving Spouse benefit will also be payable under this Plan if his or her Executive Pension Base exceeds his or her Qualified Plan Benefit. The requirement of Section 3.01(a) is waived.

Section 5.04. Calculation of Deferred Benefit. The amount of the deferred Surviving Spouse benefit under Section 5.03 will be the Executive Pension Supplement reduced in the same manner as though the benefit were payable under the ES Pension Plan. For purposes of this paragraph, the Executive Pension Supplement will be calculated by subtracting the Executive's Qualified Plan Benefit (before any reductions) from his or her Executive Pension Base.

## ARTICLE 6

### Executive Pension Base

Section 6.01. In General. This Article sets forth the rules for determining a Participant's Executive Pension Base.

Section 6.02. Executive Pension Base. The Executive Pension Base = (a) x (b) x (c) as follows:

- (a) 1.47%;
- (b) Average Annual Compensation;
- (c) the number of years of Executive Benefit Service accrued to the earliest of:
  - (1) the Executive's actual retirement date, or
  - (2) the date of the Executive's death.

Section 6.03. Average Annual Compensation. Average Annual Compensation = (a) + (b) as follows:

- (a) 12 times the average of the five highest of the Executive's December 1 monthly base salaries during the 10-year period immediately preceding the earliest of:
  - (1) the Executive's date of death, or
  - (2) the Executive's actual retirement date.

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(b) the average of the Executive's five highest annual incentive compensation awards paid under the Annual Incentive Programs or equivalent annual program or programs during the 10-year period ending with the earliest of:

- (1) the year of the Executive's death, or
- (2) the year of the Executive's actual retirement date.

(c) No earnings before March 1, 1996 are taken into account under this Article.

(d) Notwithstanding the foregoing, for Executives terminating employment with the Affiliated Companies after 2004, the averages in subsection (a) and (b) above shall be based on salaries and annual incentive compensation awards paid in 1995 or later and shall not be limited to the 10-year periods described in subsections (a) and (b). All amounts accrued as a result of this change shall be subject to Code section 409A.

(e) Average Annual Compensation normally includes only pay earned while an Executive. But see Section 3.03.

(f) The following shall not be considered as compensation for purposes of determining the amount of any benefit under the Plan:

(1) any payment authorized by the Company's Compensation Committee that is (a) calculated pursuant to the method for determining a bonus amount under the Annual Incentive Programs (AIP) for a given year, and (b) paid in lieu of such bonus in the year prior to the year the bonus would otherwise be paid under the AIP, and

(2) any award payment under the Northrop Grumman Long-Term Incentive Cash Plan.

Section 6.04. Annual Incentive Programs. The Annual Incentive Programs are the Timely Awards Program, Management Achievement Plan, the Incentive Compensation Plan, the Incentive Management Achievement Plan and the Performance Achievement Plan of the Company.

Section 6.05. Executive Benefit Service. An Executive's Executive Benefit Service is determined under (a) or (b) as appropriate, and subject to (c) and (d):

(a) Executive Benefit Service is an Executive's total years of Vesting Service under the ES Pension Plan if:

- (1) the Executive was making the Maximum Contribution during each of those years; or
- (2) the use of the Executive Buy Back process has been authorized by the Committee and the Executive:



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(A) was making the Maximum Contribution during each of those years after the date he or she first became an Executive and

(B) has complied with the provisions of the Executive Buy Back process (as set forth in Appendix A) as to those years prior to his or her first becoming an Executive.

(b) Otherwise, Executive Benefit Service is the Executive's period of Vesting Service during which he or she made the Maximum Contribution.

(c) No service before March 1, 1996 is taken into account under this Article.

(d) Notwithstanding the foregoing, for an Executive terminating employment with the Affiliated Companies after 2004, Executive Benefit Service accruals after 2004 equal (1) minus (2) below:

(1) Elapsed time while the Executive was making the Maximum Contributions, including time purchased under the Executive Buy Back process (as set forth in Appendix A);

(2) Executive Benefit Service accrued as of December 31, 2004.

All amounts accrued as a result of this change shall be subject to Code section 409A.

## ARTICLE 7

### Payment of Benefits

Section 7.01. Limitation on Benefits. No benefits will be payable under this Plan to any Executive whose employment terminates for any reason other than death prior to becoming Retirement Eligible.

Section 7.02. Normal Form and Commencement of Benefits. This Section only applies to Grandfathered Amounts. The Executive Pension Supplement will be paid for life in monthly installments, each equal to 1/12th of the annual amount determined in Article 4 or 5, whichever is applicable.

(a) The Committee will determine the form and commencement of benefit payments in its sole discretion.

(b) The Committee will choose among the various forms of payment, other than the lump sum, then available under the ES Pension Plan, subject to the same reductions or other provisions that apply to the elected form of payment under the ES Pension Plan.

(c) No payments may commence under this Plan until payments to the Executive or Surviving Spouse have commenced under the ES Pension Plan or other tax-qualified defined

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benefit plan or Defined Contribution Plan maintained by a Participating Company or Designated Entity.

See Appendix D and Appendix E for the rules that apply to other benefits earned under the Plan.

Section 7.03. Guaranteed Benefit. This Section only applies to Grandfathered Amounts. Regardless of the form of payment elected by the Committee, after the Executive retires and begins receiving an Executive Pension Supplement, a minimum of 60 times the monthly payment he or she would have received on a life annuity basis is guaranteed.

See Appendix D and Appendix E for the rules that apply to other benefits earned under the Plan.

Section 7.04. Guaranteed Surviving Spouse Benefit. This Section only applies to Grandfathered Amounts. Once a Surviving Spouse Benefit determined under Sections 5.01 and 5.02 has commenced, a minimum of 60 times the monthly benefit payable to the Surviving Spouse is guaranteed. See Appendix D and Appendix E for distribution rules that apply to death benefits that are not Grandfathered Amounts

Section 7.05. Lump Sum Payments. This Section only applies to Grandfathered Amounts. An Executive who elects lump sum payments of all his or her nonqualified benefits under the Northrop Grumman Corporation Change-In-Control Severance Plan (effective August 1, 1996, as amended) or the Northrop Grumman Corporation March 2000 Change-In-Control Severance Plan (collectively, the "CIC Plans") is entitled to have his or her Executive Pension Supplement paid as a lump sum calculated under the terms of the applicable CIC Plan. Otherwise, Executive Pension Supplement payments are governed by the general provisions of this Article, which do not provide for lump sum payments.

Northrop Grumman Corporation may, in its sole discretion, amend or eliminate any provision of the Plan with respect to lump sum distributions at any time. This applies whether or not a Participant has already made a lump sum election.

See Appendix D and Appendix E for the rules that apply to other benefits earned under the Plan

Section 7.06. Mandatory Cashout. Notwithstanding any other provisions in the Plan, Executives with Grandfathered Amounts who have not commenced payment of such benefits prior to January 1, 2008 will be subject to the following rules:

(a) Post-2007 Terminations. Executives who have a complete termination of employment with the Affiliated Companies after 2007 will receive a lump sum distribution of the present value of their Grandfathered Amounts within two months of such termination (without interest), if such present value is below the Code section 402(g) limit in effect at the termination.

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(b) Pre-2008 Terminations. Executives who had a complete termination of employment with the Affiliated Companies before 2008 will receive a lump sum distribution of the present value of their Grandfathered Amounts within two months of the time they commence payment of their underlying qualified pension plan benefits (without interest), if such present value is below the Code section 402(g) limit in effect at the time such payments commence.

For purposes of calculating present values under this Section, the actual assumptions and calculation procedures for lump sum distributions under the Northrop Grumman Pension Plan shall be used.

Section 7.07. Optional Payment Forms. Executives with Grandfathered Amounts shall be permitted to elect (a) or (b) below:

(a) To receive their Grandfathered Amounts in any form of distribution available under the Plan at October 3, 2004, provided that form remains available under the underlying qualified pension plan at the time payment of the Grandfathered Amounts commences. The conversion factors for these distribution forms will be based on the factors or basis in effect under this Plan on October 3, 2004.

(b) To receive their Grandfathered Amounts in any life annuity form not included in (a) above but included in the underlying qualified pension plan distribution options at the time payment of the Grandfathered Amounts commences. The conversion factors will be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

Section 7.08. Rehires. In the event that an Executive retires or otherwise ceases to be an Employee of a Participating Company or a Designated Entity and is later rehired by one of those entities, the provisions of Appendix B will apply.

Section 7.09. Special Tax Distribution. On the date an Executive's retirement benefit is reasonably ascertainable within the meaning of IRS regulations under Code section 3121(v)(2), an amount equal to the Executive's portion of the FICA tax withholding will be distributed in a single lump sum payment. This payment will be based on all benefits under the Plan, including Grandfathered Amounts. This payment will reduce the Executive's future benefit payments under the Plan on an actuarial basis.

## ARTICLE 8

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Conditions to Receipt of Executive Pension Supplement

Section 8.01. Non-Competition Condition. Payments of benefits under this Plan to Executives are subject to the condition that the recipient will not compete with the Company.

(a) Competition for this purpose means engaging directly or indirectly in any business which is at the time competitive with any business, part of a business, or activity then conducted by the Company, any of its subsidiaries or any other corporation, partnership, joint venture or other entity of which the Company directly or indirectly holds a 10% or greater interest (together, the "Affiliated Group") in the area in which such business, part of a business, or activity is then being conducted by the Affiliated Group.

(b) The condition of this Section may be waived with respect to a recipient but only in writing and only by the Compensation Committee of the Board.

Section 8.02. Breach of Condition. Breach of the condition contained in Section 8.01 will be deemed to occur immediately upon an Executive's engaging in competitive activity.

(a) Payments suspended for breach of the condition will not be resumed whether or not the Executive terminates the competitive activity.

(b) A recipient will be deemed to be engaged in such a business indirectly if he or she is an employee, officer, director, trustee, agent or partner of, or a consultant or advisor to or for, a person, firm, corporation, association, trust or other entity which is engaged in such a business or if he or she owns, directly or indirectly, in excess of 5% of any such firm, corporation, association, trust or other entity.

Section 8.03. Waiver After 65. The ongoing condition of this Article will not apply to an Executive age 65 or older.

ARTICLE 9

Administration

Section 9.01. Committee. This Plan will be administered by the Committee. The Committee will have the right to make reasonable rules from time to time regarding the Plan. All such rules will be consistent with the policy provided by this Plan document. The Committee will have full discretion to interpret the Plan, and to resolve ambiguities and inconsistencies. The Committee's interpretations will in all cases be final and not be subject to appeal.

Section 9.02. Claims Procedures. The Company's standardized "Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures" shall apply in handling claims and appeals under this Plan.

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Section 9.03. Trust. The Board may authorize the establishment of one or more trusts and the appointment of a trustee or trustees (“Trustee”) to hold any and all assets of the Plan in trust. The Board may delegate this power to the Committee.

ARTICLE 10

Modification or Termination

Section 10.01. Amendment and Plan Termination. The Company may, in its sole discretion, terminate, suspend or amend this Plan at any time or from time to time, in whole or in part for any reason. This includes the right to amend or eliminate any of the provisions of the Plan with respect to lump sum distributions, including any lump sum calculation factors, whether or not an Executive has already made a lump sum election. Notwithstanding the foregoing, no amendment or termination of the Plan shall reduce the amount of an Executive’s accrued benefit under the Plan as of the date of such amendment or termination.

No amendment of the Plan shall apply to the Grandfathered Amounts, unless the amendment specifically provides that it applies to such amounts. The purpose of this restriction is to prevent a Plan amendment from resulting in an inadvertent “material modification” to the Grandfathered Amounts.

ARTICLE 11

Miscellaneous

Section 11.01. Benefits Not Assignable.

(a) No Executive, former Executive or Surviving Spouse shall have the right to anticipate, alienate, sell, transfer, assign, pledge, encumber, or otherwise subject to lien any of the benefits provided under this Plan. Such rights may not be subject to the debts, contracts, liabilities, engagements or torts of the Executive, former Executive or Surviving Spouse of an Executive.

(b) Notwithstanding the foregoing, all or a portion of an Executive’s Plan benefits may be paid to another person as specified in a domestic relations order that the Committee determines is qualified (a “Qualified Domestic Relations Order”). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

(1) issued pursuant to a State’s domestic relations law;

(2) relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the Executive;

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(3) creates or recognizes the right of a spouse, former spouse, child or other dependent of the Executive to receive all or a portion of the Executive's benefits under the Plan; and

(4) meets such other requirements established by the Committee.

The Committee shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the Committee may consider the rules applicable to "domestic relations orders" under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

Section 11.02. Facility of Payment. If the Committee deems any person entitled to receive any payment under the Plan incapable of receiving it by reason of age, illness, infirmity, mental incompetency or incapacity of any kind, the Committee may, in its discretion, direct that payment be made in any one or more of the following manners:

- (a) Applying the amount directly for the comfort, support and maintenance of the payee;
- (b) Reimbursing any person for any such support supplied by any other person to the payee;
- (c) Paying the amount to a legal representative or guardian or any other person selected by the Committee on behalf of the payee; or
- (d) Depositing the amount in a bank account to the credit of the payee.

Section 11.03. Committee Rules. Payment of benefits will be made in accordance with the rules and procedures of the Committee.

Section 11.04. Limitation on Rights. The Company, in adopting this Plan, will not be held to create or vest in any Executive or any other person any interest, pension or benefits other than the benefits specifically provided herein, or to confer upon any Executive the right to remain in the service of the Company.

Section 11.05. Benefits Unsecured. Any assets purchased by the Company to provide benefits under this Plan will at all times remain subject to the claims of general creditors of the Company and any Executive, former Executive or Surviving Spouse of an Executive participating in the Plan has only an unsecured promise to pay benefits from the Company.

Section 11.06. Governing Law. To the extent not preempted by federal law, the law of the State of Maryland will govern the construction and administration of the Plan.

Section 11.07. Severability. If any provision of this Plan or its application to any circumstance or person is held to be invalid by a court of

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competent jurisdiction, the remainder of the Plan and the application of such provision to other circumstances or persons will not be affected thereby.

Section 11.08. Expanded Benefits. The Board or the Compensation Committee of the Board may, from time to time and without notice, by resolution of the Board or of the Compensation Committee of the Board, authorize the payment of benefits or expand the benefits otherwise payable or to be payable to any one or more individuals. Notwithstanding the foregoing, this Section 11.08 shall not apply to any benefits under the Plan that are not Grandfathered Amounts.

Section 11.09. Plan Costs. Benefits payable under the Plan and any expenses in connection therewith will be paid by the Company to the extent they are not available to be paid from any trust fund established by the Company to help defray the costs of providing Plan benefits.

Section 11.10. Termination of Participation. Participation in the Plan will terminate:

- (a) in the case of a nonvested Executive, upon separation from service with a Participating Company or Designated Entity;
- (b) in the case of a vested Executive, when payment of all amounts due with respect to the Executive are paid, or purported to be paid, by the Plan.

Section 11.11. Transfer of Liabilities to HII. Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. ("HII") to its shareholders on March 31, 2011 (the "HII Distribution Date"). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Plan and the liabilities for these participants' benefits under the Plan were transferred to HII. On and after the HII Distribution Date, the Company and the Plan, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Plan.

## ARTICLE 12

### Change in Control

Section 12.01. Definition. The term "Change in Control" means the occurrence of one or more of the following events:

(a) There will be consummated:

(1) Any consolidation or merger of the Company in which the Company is not the continuing or surviving corporation or pursuant to which shares of the Company's common stock would be converted into cash, securities or other property, other than a merger of the

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Company in which the holders of the Company's common stock immediately prior to the merger have the same proportionate ownership of common stock of the surviving corporation immediately after the merger; or

(2) Any sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all, or substantially all, of the assets of the Company; or

(b) The stockholders of the Company approve any plan or proposal for the liquidation or dissolution of the Company; or

(c) (1) Any person (as such term is defined in section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), corporation or other entity will purchase any common stock of the Company (or securities convertible into Company common stock) for cash, securities or any other consideration pursuant to a tender offer or exchange offer, unless, prior to the making of such purchase of Company common stock (or securities convertible into Company common stock), the Board will determine that the making of such purchase will not constitute a Change in Control; or

(2) Any person (as such term is defined in section 13(d) of the Exchange Act), corporation or other entity (other than the Company or any benefit plan sponsored by the Affiliated Companies) will become the "beneficial owner" (as such term is defined in Rule 13d-3 under the Exchange Act:), directly or indirectly, of securities of the Company representing twenty percent or more of the combined voting power of the Company's then outstanding securities ordinarily (and apart from any rights accruing under special circumstances) having the right to vote in the election of directors (calculated as provided in Rule 13d-3(d) in the case of rights to acquire any such securities), unless, prior to such person so becoming such beneficial owner, the Board will determine that such person so becoming such beneficial owner will not constitute a Change in Control; or

(d) At any time during any period of two consecutive years, individuals who at the beginning of such period constituted the entire Board will cease for any reason to constitute at least a majority thereof, unless the election or the nomination for election of each new director during such two-year period was approved by a vote of at least two-thirds of the directors then still in office who were directors at the beginning of such two-year period.

Section 12.02. Vesting and Funding Rules. Notwithstanding any other provision of the Plan, upon a Change in Control, as defined above, all Executives will be deemed fully vested under this Plan, but only such vesting as to the otherwise applicable five-year service requirement. In addition, upon a Change in Control, but only under circumstances where the successor, surviving or parent company of Northrop Grumman Corporation or the successor plan sponsor or any successor thereto, if any, does not agree to assume the obligation to provide benefits under this Plan as they become due and payable, then an amount sufficient to fund all unpaid benefits and any Surviving Spouse benefits payable under this Plan will be paid immediately by the Company to a Trustee pursuant to a Trust Agreement for the payment of such benefits at the earliest date available in accordance with the provisions of the Plan and on such terms as the committee composed of the Company's Chief Executive Officer, Chief Financial Officer and General Counsel, will deem appropriate



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(including a direction to the Trustee to pay immediately all benefits that are Grandfathered Amounts on a present value basis and/or such other terms as they may deem appropriate). Notwithstanding this funding, the Company will be obligated to pay benefits to Executives and to Surviving Spouses of Executives to the extent such funding proves to be insufficient. To the extent such funding proves to be more than sufficient, any excess will revert to the Company.

Section 12.03. Special Retirement Provisions. Upon a Change in Control, for any Executive in the Plan who is involuntarily separated and who is not then eligible for a Normal or Special Retirement Pension under the ES Pension Plan, such separation will be deemed to be a separation due to a “Permanent Job Separation”, and the Special Retirement Pension provisions under the ES Pension Plan will be used for purposes of determining eligibility and payment of benefits to such Executive under the Plan, provided that distribution of amounts that are not Grandfathered Amounts will still be controlled by Appendix D and Appendix E.

Section 12.04. Calculation of Present Value. The present value of benefits payable by the Trustee will be calculated for specific groups of Executives at the time of the Change in Control as follows:

(a) The present value of the benefits payable from this Plan to Executives who have retired at the time of the Change in Control (as well as benefits payable from this Plan to any Surviving Spouse of an Executive) will be calculated by using the PBGC immediate discount rate established and in effect for the beginning of the calendar year in which the Change in Control occurs.

(b) The present value of the benefits payable from this Plan to Executives who are eligible to retire under the terms of this Plan at the time of the Change in Control will be calculated by using the PBGC immediate discount rates established and in effect at the beginning of the calendar year in which the Change in Control occurs, assuming a pension which is immediately payable at the time of the Change in Control.

(c) The present value of the benefits payable from this Plan to Executives who have completed at least 30 years of service with a Participating Company or a Designated Entity but have not yet attained age 58 at the time of the Change in Control will be calculated by using the PBGC deferred discount rates established and in effect for the beginning of the calendar year in which the Change in Control occurs, assuming a pension which is payable at age 58.

(d) The present value of benefits payable from this Plan to Executives who have completed at least 10 years of service with a Participating Company or a Designated Entity but less than 30 years of service at the time of the Change in Control, but have not yet attained age 60 at the time of the Change in Control, will be calculated by using the PBGC deferred discount rates established and in effect for the beginning of the calendar year in which the Change in Control occurs, assuming a pension which is payable at age 60.

(e) The present value of benefits payable from this Plan to Executives who have completed less than 10 years of service with a Participating Company or a Designated Entity at the time of the Change in Control will be calculated by using the PBGC deferred discount rates

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established and in effect for the beginning of the calendar year in which the Change in Control occurs, assuming a pension which is payable at age 65.

Section 12.05. Calculation of Offset. In calculating the benefit payable to each Executive, any offset for the ES Pension Plan or other plan in which the Executive participates, will be based upon the last official pension file data available, adjusted to the date of any Change in Control by assuming that the most recent salary reflected in the pension file remains constant.

Section 12.06. Limitation on Amendment, Suspension and Termination. Notwithstanding any provision of this Plan, this Plan may not be:

- (a) Amended such that future benefits would be reduced;
- (b) Suspended; or
- (c) Terminated;

as to the further accrual of benefits, for a period of 24 months following a Change in Control; and as to the payment of benefits, at any time prior to the last payment, determined in accordance with the provisions of this Plan, to each Executive, former Executive receiving benefits under the Plan, or eligible spouse.

\* \* \*

IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and  
Chief Human Resources Officer

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APPENDIX A

Executive Buyback

Section A.01. Introduction. The Executive Buy Back process permits newly eligible Executives to “buy back” past years of Executive Benefit Service under the Plan for periods of time during which they did not make the Maximum Contribution.

Section A.02. Buy Back Offer. If an Employee did not make the Maximum Contribution during each of the years of his or her Vesting Service prior to the time he or she first became an Executive, the Employee will be permitted to pay make-up payments of Maximum Contributions in order to “buy back” his or her non-contributory years of service.

(a) The make-up payments required are the Maximum Contributions that would have been payable during the 10 years prior to the date he or she first became an Executive (or such lesser period from the date the Employee was employed by a Participating Company or a Designated Entity) plus compounded interest on those amounts.

(b) This Plan is intended as essentially a continuation of the Westinghouse Plan (see Appendix C). Accordingly, this Section is to be interpreted as requiring an Executive to make up Maximum Contributions not only for his or her periods of participation under this Plan but also Maximum Contributions that would have been due under the Westinghouse Plan. The terms of (a) will be interpreted to include the corresponding terms under the Westinghouse Plan and the 10-year period will include periods before the Westinghouse Acquisition.

Section A.03. One-Time Opportunity. Upon qualifying as an Executive, an Executive will be offered an Executive Buy Back opportunity at the time he or she first becomes an Executive (or when this Appendix first becomes effective, if later). The actual terms of the Executive Buy Back will be determined from time to time by the Committee. This election will be offered one time to the Executive and his or her decision whether or not to “buy back” will be irrevocable.

Section A.04. Payment. Executive Buy Back payments are pre-tax and are made from compensation by deferral elections entered into prior to the year in which the compensation is determined and paid. Executive Buy Back payments will not be deposited into the ES Pension Plan trust and will not increase the Executive’s Qualified Plan Benefit.

Section A.05. Refund of Buy Back Payment. If, at some point, an Employee is no longer an Executive or otherwise becomes ineligible to receive an Executive Pension Supplement, any Executive Buy Back payments the Employee has made (including any interest the Employee paid) plus any other amount as defined in Section 2.16(b)(2) in the definition of Maximum Contribution paid by the Employee to the Company will be refunded, with interest at such time as the Employee meets one of the following criteria:

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(a) Termination or retirement from a Participating Company or a Designated Entity; or

(b) Death;

provided, however, no refund will be made if the Employee is an eligible Executive, whether or not the amount of his or her Executive Pension Supplement exceeds zero. All interest rates will be determined at the discretion of the Committee.

Any amounts that are refundable under this Section A.05 that are not Grandfathered Amounts will be paid in a lump sum upon the Executive's Separation from Service, subject to the six-month delay rule in Section E.02.

Section A.06. Effective Date. The provisions of this Appendix permitting Buy Backs will become effective on a date specified by resolution of the Committee specifically citing this Section.

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APPENDIX B

Rehired Executives

Section B.01. Retired Executives Rehired as Executives. If an Executive who retired from a Participating Company or a Designated Entity and who received or is receiving an Executive Pension Supplement as a lump sum or on a monthly basis is rehired in an Executive position by a Participating Company, Designated Entity, or any other Affiliated Company, the following provisions apply:

(a) Monthly Payments: For an Executive with a monthly Executive Pension Supplement:

(1) The Plan will suspend all Executive Pension Supplement payments that are Grandfathered Amounts;

(2) If, but only if, the Executive is Retirement Eligible at the time of subsequent actual retirement:

(A) Previous years of Vesting Service and Executive Benefit Service accrued prior to the Executive's retirement will be restored; and

(B) The Executive's Executive Pension Supplement will be recalculated in accordance with the Plan at his or her subsequent actual retirement date as long as the Executive then meets all Plan benefit qualification requirements;

(3) The Executive, having previously met the requirement of five years of continuous service as an Executive prior to his or her first retirement, need not again meet that requirement;

(4) The Executive's Average Annual Compensation will be computed without regard to the break in service, using zero for any periods during which the Executive was a retiree;

(5) If the Executive elected to take a lump sum Qualified Plan Benefit with respect to his or her initial retirement, then in any subsequent calculation of the Executive's Executive Pension Supplement, the Executive's Executive Pension Base will be reduced by both the Executive's Qualified Plan Benefit received at the time of the initial retirement and the Executive's Qualified Plan Benefit accrued from the date of rehire through the date of his or her subsequent retirement.

(6) If the Executive continued to receive payments that were not Grandfathered Amounts during the period of rehire, an actuarial reduction will apply at his subsequent termination.

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(b) Lump Sums: For an Executive who received a lump sum Executive Pension Supplement and who is Retirement Eligible at the time of subsequent actual retirement:

(1) Previous years of Vesting Service will be restored but not previous years of Executive Benefit Service;

(2) The Plan will calculate the Executive's additional Executive Pension Supplement at his or her subsequent actual retirement date on the basis of years of service after the rehire in accordance with the Plan as the Executive then meets all Plan benefit qualification requirements;

(3) The Executive, having previously met the requirement of five years of continuous service as an Executive prior to his or her first retirement, need not again meet that requirement;

(4) The Executive's Average Annual Compensation will be computed without regard to the break in service, using zero for any periods during which the Executive was a retiree;

(5) If the Executive elected a monthly Qualified Plan Benefit with respect to his or her initial retirement, then the Executive's Qualified Plan Benefit accrued from the date of rehire through the subsequent date of actual retirement will be subtracted from the Executive's Executive Pension Base in calculating the Executive's additional Executive Pension Supplement at his or her subsequent retirement.

Section B.02. Former Executives with Vested Pensions Rehired as Executives. If the employment of an Executive of a Participating Company or a Designated Entity who was eligible only for a vested pension under the relevant qualified defined benefit or Defined Contribution Plan, if any, was terminated and the Executive is rehired by a Participating Company, Designated Entity, or any other Affiliated Company, the following provisions apply:

(a) Previous years of Vesting Service and Executive Benefit Service accrued prior to the Executive's termination of employment will be restored;

(b) The Executive must meet the requirement of five years of continuous service as an Executive prior to a subsequent actual retirement, counting only years of service after the rehire;

(c) Only base salary and incentive awards earned after the rehire will be used in computing Average Annual Compensation;

(d) If the Executive elected to take his or her vested pension as a lump sum, in any calculation of an Executive Pension Supplement at actual retirement, the Executive's Executive Pension Base will be reduced by both the Executive's Qualified Plan Benefit at the time of the initial termination of employment and the Executive's Qualified Plan Benefit accrued from the date of rehire through the date of actual retirement.

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Section B.03. Retired Executives Rehired in Non-Executive Positions. If an Executive who retired from a Participating Company or a Designated Entity and who received or is receiving an Executive Pension Supplement as a lump sum or on a monthly basis is rehired by a Participating Company, Designated Entity, or any other Affiliated Company in a non-Executive position, the following provisions apply:

(a) For a former Executive who was receiving a monthly Executive Pension Supplement:

(1) The Plan will suspend all Executive Pension Supplement payments that are Grandfathered Amounts;

(2) If, but only if, the former Executive is still Retirement Eligible at the time of subsequent actual retirement, the Plan will recommence Executive Pension Supplement payments that were suspended at the time of the Executive's subsequent actual retirement without recalculation of amount;

(3) At subsequent actual retirement, the former Executive may receive any form of payment of his or her Executive Pension Supplement then permitted under the Plan, as selected by the Committee.

(b) For a former Executive who received his or her Executive Pension Supplement as a lump sum, no further benefits will be paid by the Plan.

Section B.04. Events That Span Westinghouse Acquisition. This Plan is intended as essentially a continuation of the Westinghouse Plan (see Appendix C) and this Appendix is to be interpreted accordingly.

(a) Reductions for payments of Qualified Plan Benefits will be interpreted to include reductions for payments of similar benefits under Westinghouse plans.

(b) Determination of the form of Qualified Plan Benefits will take into account the form of payments under Westinghouse plans.

(c) The terms of this Appendix will be interpreted, where appropriate, to include the corresponding terms under the Westinghouse Plan and to take into account events both before and after the Westinghouse Acquisition.

Section B.05. Breaks Spanning March 1, 1996. There may be Executives who participated in the Westinghouse Plan but because of a break in their service did not become employees of the Affiliated Companies on March 1, 1996 as a result of the Westinghouse Acquisition.

(a) Those Executives might be hired later by the Electronic Sensors & Systems Division.

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(b) They will in no case be entitled to service or compensation credits or benefits under this Plan with respect to any service or compensation prior to their first hire by the Electronic Sensors & Systems Division after March 1, 1996. The Executives will not be considered to have previously met the requirement of five years of continuous service as an Executive.



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APPENDIX C

Coordination With Westinghouse Plan

Section C.01. In General. As part of the Westinghouse Acquisition, this Plan was established by Northrop Grumman Corporation.

(a) This Plan is intended to be a continuation of the Westinghouse Plan with only minor changes.

(b) This Plan assumes remaining liabilities of the Westinghouse Plan with regard to those participants of the Westinghouse Plan who became Employees of the Northrop Grumman controlled group on March 1, 1996 as a result of the Westinghouse Acquisition. Accordingly, benefits earned by Participants of this Plan under the Westinghouse Plan before March 1, 1996 are payable under this Appendix.

(c) Employees first hired after the Westinghouse Acquisition will therefore not be affected by this Appendix and will have their pension benefits governed entirely by the other Articles and Appendices of this Plan.

Section C.02. Pre-Acquisition Benefits.

(a) Except as provided in Sections C.03 and C.04, benefits earned under the Westinghouse Executive Pension Plan are in addition to the benefits which may be earned under Articles 4 and 5.

(b) The Westinghouse Plan benefits will be calculated taking into account all pertinent facts for determining benefits under the Westinghouse Plan's provisions (including benefits and contributions under Westinghouse plans) as they have existed from time to time.

Section C.03. Coordination of Pre and Post-Acquisition Benefits. The Plan will be interpreted in light of events before and after the Westinghouse Acquisition to coordinate the calculation of benefits (including service and compensation components, benefits and contributions under Westinghouse plans and rehire provisions) under this Appendix and benefits based on Articles 4 and 5 so that the Plan will function as if it were essentially a continuation of the Westinghouse Plan.

Section C.04. No Duplication of Benefits. Because this Plan is intended as a continuation of the Westinghouse Plan, this Plan will not pay any benefits already paid or payable by the Westinghouse Plan itself.

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APPENDIX D

2005-2007 Transition Rules

This Appendix D provides the distribution rules that apply to the portion of benefits under the Plan subject to Code section 409A for Executives with benefit commencement dates after January 1, 2005 and before January 1, 2008.

Section D.01. Election. Executives scheduled to commence payments during 2005 may elect to receive both pre-2005 benefit accruals and 2005 benefit accruals in any optional form of benefit available under the Plan as of December 31, 2004. Executives electing optional forms of benefits under this provision will commence payments on the Executive's selected benefit commencement date.

Section D.02. 2005 Commencements. Pursuant to IRS Notice 2005-1, Q&A-19 & Q&A-20, Executives commencing payments in 2005 from the Plan may elect a form of distribution from among those available under the Plan on December 31, 2004, and benefit payments shall begin at the time elected by the Executive.

(a) Key Employees. A Key Employee Separating from Service on or after July 1, 2005, with Plan distributions subject to Code section 409A scheduled to be paid in 2006 and within six months of his date of Separation from Service, shall have such distributions delayed for six months from the Key Employee's date of Separation from Service. The delayed distributions shall be paid as a single sum with interest at the end of the six month period and Plan distributions will resume as scheduled at such time. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years). Alternatively, the Key Employee may elect under IRS Notice 2005-1, Q&A-20 to have such distributions accelerated and paid in 2005 without the interest adjustment, provided, such election is made in 2005.

(b) Lump Sum Option. During 2005, a temporary immediate lump sum feature shall be available as follows:

(1) In order to elect a lump sum payment pursuant to IRS Notice 2005-1, Q&A-20, an Executive must be an elected or appointed officer of the Company and eligible to commence payments under the underlying qualified pension plan on or after June 1, 2005 and on or before December 1, 2005;

(2) The lump sum payment shall be made in 2005 as soon as feasible after the election; and

(3) Interest and mortality assumptions and methodology for calculating lump sum amount shall be based on the Plan's procedures for calculating lump sums as of December 31, 2004.

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Section D.03. 2006 and 2007 Commencements. Pursuant to IRS transition relief, for all benefit commencement dates in 2006 and 2007 (provided election is made in 2006 or 2007), distribution of Plan benefits subject to Code section 409A shall begin 12 months after the later of: (a) the Executive's benefit election date, or (b) the underlying qualified pension plan benefit commencement date (as specified in the Executive's benefit election form). Payments delayed during this 12-month period will be paid at the end of the period with interest. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such period (i.e., the rate may change in the event the period spans two calendar years).

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APPENDIX E

Post 2007 Distribution of 409A Amounts

The provisions of this Appendix E shall apply only to the portion of benefits under the Plan that are subject to Code section 409A with benefit commencement dates on or after January 1, 2008. Distribution rules applicable to the Grandfathered Amounts are set forth in Article VII, and Appendix D addresses distributions of amounts subject to Code section 409A with benefit commencement dates after January 1, 2005 and prior to January 1, 2008

Section E.01. Time of Distribution. Subject to the special rules provided in this Appendix E, distributions to an Executive of his vested retirement benefit shall commence as of the Payment Date.

Section E.02. Special Rule for Key Employees. If an Executive is a Key Employee and age 55 or older at his Separation from Service, distributions to the Executive shall commence on the first day of the seventh month following the date of his Separation from Service (or, if earlier, the date of the Executive's death). Amounts otherwise payable to the Executive during such period of delay shall be accumulated and paid on the first day of the seventh month following the Executive's Separation from Service, along with interest on the delayed payments. Interest shall be computed using the retroactive annuity starting date rate in effect under the Northrop Grumman Pension Plan on a month-by-month basis during such delay (i.e., the rate may change in the event the delay spans two calendar years).

Section E.03. Forms of Distribution. Subject to the special rules provided in this Appendix E, an Executive's vested retirement benefit shall be distributed in the form of a single life annuity. However, an Executive may elect an optional form of benefit up until the Payment Date. The optional forms of payment are:

- (a) 50% joint and survivor annuity
- (b) 75% joint and survivor annuity
- (c) 100% joint and survivor annuity.

If an Executive is married on his Payment Date and elects a joint and survivor annuity, his survivor annuitant will be his spouse unless some other survivor annuitant is named with spousal consent. Spousal consent, to be effective, must be submitted in writing before the Payment Date and must be witnessed by a Plan representative or notary public. No spousal consent is necessary if the Company determines that there is no spouse or that the spouse cannot be found

Section E.04. Death. If a married Executive dies before the Payment Date, a death benefit will be payable to the Executive's

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spouse commencing 90 days after the Executive's death. The death benefit will be a single life annuity in an amount equal to the survivor portion of an Executive's vested retirement benefit based on a 100% joint and survivor annuity determined on the Executive's date of death. This benefit is also payable to an Executive's domestic partner who is properly registered with the Company in accordance with procedures established by the Company.

Section E.05. Actuarial Assumptions. Except as provided in Section E.06, all forms of payment under this Appendix E shall be actuarially equivalent life annuity forms of payment, and all conversions from one such form to another shall be based on the following actuarial assumptions:

Interest Rate: 6%

Mortality Table: RP-2000 Mortality Table projected 15 years for future standardized cash balance factors

Section E.06. Accelerated Lump Sum Payouts.

(a) Post-2007 Separations. Notwithstanding the provisions of this Appendix E, for Executives who Separate from Service on or after January 1, 2008, if the present value of (a) the vested portion of an Executive's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date of his Separation from Service, is less than or equal to \$25,000, such benefit amount shall be distributed to the Executive (or his spouse or domestic partner, if applicable) in a lump sum payment. Subject to the special timing rule for Key Employees under Section E.02, the lump sum payment shall be made within 90 days after the first of the month coincident with or following the date of the Executive's Separation from Service.

(b) Pre-2008 Separations. Notwithstanding the provisions of this Appendix E, for Executives who Separate from Service before January 1, 2008, if the present value of (a) the vested portion of an Executive's retirement benefit and (b) other vested amounts under nonaccount balance plans that are aggregated with the retirement benefit under Code section 409A, determined on the first of the month coincident with or following the date the Executive attains age 55, is less than or equal to \$25,000, such benefit amount shall be distributed to the Executive (or his spouse or domestic partner, if applicable) in a lump sum payment within 90 days after the first of the month coincident with or following the date the Executive attains age 55, but no earlier than January 1, 2008.

(c) Conflicts of Interest. The present value of an Executive's vested retirement benefit shall also be payable in an immediate lump sum to the extent required under conflict of interest rules for government service and permissible under Code section 409A.

(d) Present Value Calculation. The conversion of an Executive's retirement benefit into a lump sum payment and the present value calculations under this Section E.06 shall be

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based on the actuarial assumptions in effect under the Northrop Grumman Pension Plan for purposes of calculating lump sum amounts, and will be based on the Executive's immediate benefit if the Executive is 55 or older at Separation from Service. Otherwise, the calculation will be based on the benefit amount the Executive will be eligible to receive at age 55.

Section E.07. Effect of Early Taxation. If the Executive's benefits under the Plan are includible in income pursuant to Code section 409A, such benefits shall be distributed immediately to the Executive.

Section E.08. Permitted Delays. Notwithstanding the foregoing, any payment to an Executive under the Plan shall be delayed upon the Company's reasonable anticipation of one or more of the following events:

- (a) The Company's deduction with respect to such payment would be eliminated by application of Code section 162(m); or
- (b) The making of the payment would violate Federal securities laws or other applicable law;

provided, that any payment delayed pursuant to this Section E.08 shall be paid in accordance with Code section 409A.

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APPENDIX F

Committees and Appointments

Notwithstanding anything to the contrary in this Plan, effective as of October 25, 2011, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Article 9 of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

NORTHROP GRUMMAN  
DEFERRED COMPENSATION PLAN  
(Amended and Restated Effective as of January 1, 2012)



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NORTHROP GRUMMAN  
DEFERRED COMPENSATION PLAN  
(Amended and Restated Effective as of January 1, 2012)

The Northrop Grumman Deferred Compensation Plan (the "Plan") was last amended and restated effective as of January 1, 2011. This restatement amends that version of the Plan, and is effective January 1, 2012. This restatement includes changes that apply to amounts earned and vested under the Plan prior to 2005.

This Plan is intended (1) to comply with section 409A of the Internal Revenue Code, as amended (the "Code") and official guidance issued thereunder (except with respect to amounts covered by Appendix B), and (2) to be "a plan which is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of sections 201(2), 301(a)(3) and 401(a)(1) of the Employee Retirement Income Security Act of 1974. Notwithstanding any other provision of this Plan, this Plan shall be interpreted, operated and administered in a manner consistent with these intentions.

**ARTICLE I**

**DEFINITIONS**

1.1 Definitions

Whenever the following words and phrases are used in this Plan, with the first letter capitalized, they shall have the meanings specified below.

(a) "Account" shall mean the recordkeeping account set up for each Participant to keep track of amounts to his or her credit.

(b) "Administrative Committee" means the committee in charge of Plan administration, as described in Article VII.

(c) "Affiliated Companies" shall mean the Company and any entity affiliated with the Company under Code sections 414(b) or (c).

(d) "Base Salary" shall mean a Participant's annual base salary, excluding bonuses, commissions, incentive and all other remuneration for services rendered to the Affiliated Companies and prior to reduction for any salary contributions to a plan established pursuant to section 125 of the Code or qualified pursuant to section 401(k) of the Code.

(e) "Beneficiary" or "Beneficiaries" shall mean the person or persons, including a trustee, personal representative or other fiduciary, last designated in writing by a

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Participant in accordance with procedures established by the Administrative Committee to receive the benefits specified hereunder in the event of the Participant's death.

(1) No Beneficiary designation shall become effective until it is filed with the Administrative Committee.

(2) Any designation shall be revocable at any time through a written instrument filed by the Participant with the Administrative Committee with or without the consent of the previous Beneficiary.

(3) No designation of a Beneficiary other than the Participant's spouse shall be valid unless consented to in writing by such spouse. If there is no such designation or if there is no surviving designated Beneficiary, then the Participant's surviving spouse shall be the Beneficiary. If there is no surviving spouse to receive any benefits payable in accordance with the preceding sentence, the duly appointed and currently acting personal representative of the Participant's estate (which shall include either the Participant's probate estate or living trust) shall be the Beneficiary. In any case where there is no such personal representative of the Participant's estate duly appointed and acting in that capacity within 90 days after the Participant's death (or such extended period as the Administrative Committee determines is reasonably necessary to allow such personal representative to be appointed, but not to exceed 180 days after the Participant's death), then Beneficiary shall mean the person or persons who can verify by affidavit or court order to the satisfaction of the Administrative Committee that they are legally entitled to receive the benefits specified hereunder. Effective January 1, 2007, a Participant will automatically revoke a designation of a spouse as primary beneficiary upon the dissolution of their marriage.

(4) In the event any amount is payable under the Plan to a minor, payment shall not be made to the minor, but instead be paid (a) to that person's living parent(s) to act as custodian, (b) if that person's parents are then divorced, and one parent is the sole custodial parent, to such custodial parent, or (c) if no parent of that person is then living, to a custodian selected by the Administrative Committee to hold the funds for the minor under the Uniform Transfers or Gifts to Minors Act in effect in the jurisdiction in which the minor resides. If no parent is living and the Administrative Committee decides not to select another custodian to hold the funds for the minor, then payment shall be made to the duly appointed and currently acting guardian of the estate for the minor or, if no guardian of the estate for the minor is duly appointed and currently acting within 60 days after the date the amount becomes payable, payment shall be deposited with the court having jurisdiction over the estate of the minor.

(5) Payment by the Affiliated Companies pursuant to any unrevoked Beneficiary designation, or to the Participant's estate if no such designation exists, of all benefits owed hereunder shall terminate any and all liability of the Affiliated Companies.

(f) "Board" shall mean the Board of Directors of the Company.

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(g) "Bonuses" shall mean the bonuses earned under the Company's formal incentive plans, as defined by the Administrative Committee, and payable while a Participant is an Employee.

(h) "Code" shall mean the Internal Revenue Code of 1986, as amended.

(i) "Committees" shall mean the Committees appointed by the Board to administer the Plan and investments in accordance with Article VII.

(j) "Company" shall mean Northrop Grumman Corporation and any successor.

(k) "Compensation" shall be Base Salary plus Bonuses. However, any payment authorized by the Compensation and Management Development Committee that is (1) calculated pursuant to the method for determining a bonus amount under the Annual Incentive Plan (AIP) for a given year and (2) paid in lieu of such bonus in the year prior to the year the bonus would otherwise be paid under the AIP, shall not be treated as Compensation. Further, any award payment under the Northrop Grumman Long-Term Incentive Cash Plan shall not be treated as Compensation.

(l) "Disability" or "Disabled" shall mean the Participant's inability to perform each and every duty of his or her occupation or position of employment due to illness or injury as determined in the sole and absolute discretion of the Administrative Committee.

(m) "Early Distribution" shall mean an election by a Participant in accordance with Appendix Section B.2 to receive a withdrawal of amounts from his or her Account prior to the time at which such Participant would otherwise be entitled to such amounts.

(n) "Eligible Employee" shall mean any Employee who meets the following conditions:

- (1) he or she is initially treated by the Affiliated Companies as an Employee and not as an independent contractor; and
- (2) he or she meets the eligibility criteria established by the Administrative Committee.

The eligibility criteria established by the Administrative Committee will include, but not be limited to, classifications of Employees who are eligible to participate and the date as of which various groups of Employees will be eligible to participate. This includes, for example, Administrative Committee authority to delay eligibility for employees of newly acquired companies who become Employees.

(o) "Employee" shall mean any common law employee of the Affiliated Companies.

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(p) "ERISA" shall mean the Employee Retirement Income Security Act of 1974, as it may be amended from time to time.

(q) "Hardship Distribution" shall mean a severe financial hardship to the Participant resulting from a sudden and unexpected illness or accident of the Participant or of his or her dependent (as defined in Section 152(a) of the Code), loss of a Participant's property due to casualty, or other similar or extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant. The circumstances that would constitute an unforeseeable emergency will depend upon the facts of each case, but, in any case, a Hardship Distribution may not be made to the extent that such hardship is or may be relieved (i) through reimbursement or compensation by insurance or otherwise, (ii) by liquidation of the Participant's assets, to the extent the liquidation of assets would not itself cause severe financial hardship, or (iii) by cessation of deferrals under this Plan.

(r) "Initial Election Period" shall mean:

(1) in the case of a newly hired Employee who is entitled to participate under Article II, the 30-day period following the date on which the Employee first becomes an Eligible Employee; and

(2) in the case of any other Employee who becomes an Eligible Employee and is entitled to participate under Article II, the next Open Enrollment Period.

(s) "Investment Committee" means the committee in charge of investment aspects of the Plan, as described in Article VII.

(t) "Key Employee" means an employee treated as a "specified employee" under Code section 409A(a)(2)(B)(i) of the Company or the Affiliated Companies (i.e., a key employee (as defined in Code section 416(i) without regard to paragraph (5) thereof) if the Company's or an Affiliated Company's stock is publicly traded on an established securities market or otherwise. The Company shall determine in accordance with a uniform Company policy which Participants are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be used. Such determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

(u) "Open Enrollment Period" means the period each Plan Year designated by the Administrative Committee for electing deferrals for the following Plan Year.

(v) "Participant" shall mean any Eligible Employee who participates in this Plan in accordance with Article II.

(w) "Payment Date" shall mean:

(1) for distributions upon early termination under Section B.1(a), a date after the end of the month in which termination of employment occurs;

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(2) for distributions after Retirement, Disability or death under Section B.1(b), a date after the end of the month in which occurs Retirement, the determination of Disability by the Administrative Committee, or the notification of the Administrative Committee of the Participant's death (or later qualification of the Beneficiary or Beneficiaries), as applicable; and

(3) for distributions with a scheduled withdrawal date under Section B.1(c), a date after the December 31 prior to the elected payment year,

the exact date in each case to be determined by the Administrative Committee to allow time for administrative processing.

(x) "Plan" shall be the Northrop Grumman Deferred Compensation Plan.

(y) "Plan Year" shall be the calendar year.

(z) "Retirement" shall mean termination of employment with the Affiliated Companies after reaching age 55.

(aa) "Scheduled Withdrawal Date" shall mean the distribution date elected by the Participant for an in-service withdrawal of amounts deferred in a given Plan Year, and earnings and losses attributable thereto, as set forth on the election form for such Plan Year.

(bb) "Separation from Service" or "Separates from Service" or "Separating from Service" means a "separation from service" within the meaning of Code section 409A.

## **ARTICLE II**

### **PARTICIPATION**

#### **2.1 In General**

(a) An Eligible Employee may become a Participant by complying with the procedures established by the Administrative Committee for enrolling in the Plan.

(b) Anyone who becomes an Eligible Employee will be entitled to become a Participant during his or her Initial Election Period or any subsequent Open Enrollment Period.

(c) An individual will cease to be a Participant when he or she no longer has a positive balance to his or her Account under the Plan.

#### **2.2 Disputes as to Employment Status**

(a) Because there may be disputes about an individual's proper status as an Employee or non-Employee, this Section describes how such disputes are to be handled with respect to Plan participation.



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(b) The Affiliated Companies will make the initial determination of an individual's employment status.

(1) If an individual is not treated by the Affiliated Companies as a common law employee, then the Plan will not consider the individual to be an "Eligible Employee" and he or she will not be entitled to participate in the Plan.

(2) This will be so even if the individual is told he or she is entitled to participate in the Plan and given a summary of the plan and enrollment forms or other actions are taken indicating that he or she may participate.

(c) Disputes may arise as to an individual's employment status. As part of the resolution of the dispute, an individual's status may be changed by the Affiliated Companies from non-Employee to Employee. Such Employees are not Eligible Employees.

### 2.3 Cessation of Eligibility

If the Administrative Committee determines or reasonably believes that a Participant has ceased to be a management or highly compensated employee within the meaning of ERISA Title I, the Participant will no longer be able to make elections to defer compensation under the Plan.

If an Eligible Employee receives a distribution under Appendix Section B.2, the Employee will not be permitted to defer amounts under the Plan for the two Plan Years following the year of distribution.

## ARTICLE III

### DEFERRAL ELECTIONS

#### 3.1 Elections to Defer Compensation

(a) Initial Elections. Each Participant may elect to defer an amount of Compensation by filing an election with the Administrative Committee no later than the last day of his or her Initial Election Period. If the election is made pursuant to Section 1.1(r)(1), it will apply for the remainder of the Plan Year. Otherwise, the election will apply for the following Plan Year.

(b) Subsequent Elections. A Participant may elect to defer Compensation earned in subsequent Plan Years by filing a new election in the Open Enrollment Period for each subsequent Plan Year. An election to participate for a Plan Year is irrevocable.

(c) General Rules for all Elections. The Administrative Committee may establish procedures for elections and set limits and other requirements on the amount of Compensation that may be deferred. The Administrative Committee may change these rules from time to time. Deferral elections shall address distribution of the deferred amounts as described in Section 6.1.

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(d) Committee Rules. All elections must be made in accordance with rules, procedures and forms provided by the Administrative Committee. The Administrative Committee may change the rules, procedures and forms from time to time and without prior notice to Participants.

(e) Cancellation of Election. If a Participant becomes disabled (as defined under Code Section 409A) or obtains a distribution on account of an Unforeseeable Emergency under Section 6.2 during a Plan Year, his deferral election for such Plan Year shall be cancelled.

### 3.2 Crediting of Deferrals

(a) In General. Amounts deferred by a Participant under the Plan shall be credited to the Participant's Account as soon as practicable after the amounts would have otherwise been paid to the Participant.

(b) Cessation of Crediting. Effective January 1, 2011, no further amounts will be deferred under the Plan and credited to Participant Accounts.

### 3.3 Investment Elections

(a) The Investment Committee will establish a number of different types of investments for the Plan. The Investment Committee may change the investments from time to time, without prior notice to Participants.

(b) Participants may elect how their future contributions and existing Account balances will be deemed invested in the various types of investment and may change their elections from time to time.

(c) Although the Participants may designate the deemed investment of their Accounts, the Investment Committee is not bound to invest any actual amounts in any particular investment. The Investment Committee will select from time to time, in its sole and absolute discretion, commercially available investments of each of the types offered. Any investments actually made remain the property of the Affiliated Companies (or the rabbi trust under Section 4.2) and are not Plan assets.

(d) Selections of the types of investments, changes and transfers must be made according to the rules and procedures of the Administrative Committee.

(1) The Administrative Committee may prescribe rules which may include, among other matters, limitations on the amounts which may be transferred and procedures for electing transfers.

(2) The Administrative Committee may prescribe rules for valuing Accounts for purposes of transfers. Such rules may, in the Administrative Committee's discretion, use averaging methods to determine values and accrue estimated expenses.

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(3) The Administrative Committee may prescribe the periods and frequency with which Participants may change deemed investment elections and make transfers.

(4) The Administrative Committee may change its rules from time to time and without prior notice to Participants.

(e) Effective January 13, 2011, Participant investment elections involving a Company stock investment fund (e.g., transfers into or out of the fund) may be restricted, including in accordance with Company policies generally applicable to employee transactions in Company stock.

3.4 Investment Return Not Guaranteed

Investment performance under the Plan is not guaranteed at any level. Participants may lose all or a portion of their contributions due to poor investment performance.

**ARTICLE IV**

**ACCOUNTS AND TRUST FUNDING**

4.1 Accounts

The Administrative Committee shall establish and maintain an Account for each Participant under the Plan. Each Participant's Account shall be further divided into separate subaccounts ("investment subaccounts"), each of which corresponds to an investment type elected by the Participant pursuant to Section 3.3. A Participant's Account shall be credited as follows:

(a) The Administrative Committee shall credit the investment subaccounts of the Participant's Account with an amount equal to Compensation deferred by the Participant in accordance with the Participant's election under Section 3.3; that is, the portion of the Participant's deferred Compensation that the Participant has elected to be deemed invested in a certain type of investment shall be credited to the investment subaccount corresponding to that investment type.

(b) The investment subaccounts of Participants' Accounts will be credited with earnings or losses based on the earnings or losses of the corresponding investments selected by the Participant and valued in accordance with the rules and procedures of the Administrative Committee.

(1) The Administrative Committee may set regular valuation dates and times and also use special valuation dates and times and procedures from time to time under unusual circumstances and to protect the financial integrity of the Plan.

(2) The Administrative Committee may use averaging methods to determine values and accrue estimated expenses.

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(3) The Administrative Committee may change its valuation rules and procedures from time to time and without prior notice to Participants.

4.2 Use of a Trust

The Company may set up a trust to hold any assets or insurance policies that it may use in meeting its obligations under the Plan. Any trust set up will be a rabbi trust and any assets placed in the trust shall continue for all purposes to be part of the general assets of the Company and shall be available to its general creditors in the event of the Company's bankruptcy or insolvency.

**ARTICLE V**

**VESTING**

5.1 In General

A Participant's interest in his or her Account will be nonforfeitable.

5.2 Exceptions

The following exceptions apply to the vesting rule:

- (a) Forfeitures on account of a lost payee. See Section 6.4.
- (b) Forfeitures under an escheat law.
- (c) Recapture of amounts improperly credited to a Participant's Account or improperly paid to or with respect to a Participant.
- (d) Expenses charged to a Participant's Account.
- (e) Investment losses.
- (f) Forfeitures resulting from early withdrawals. See Section B.2.

**ARTICLE VI**

**DISTRIBUTIONS**

6.1 Distribution of Deferred Compensation Contributions

Appendix B governs the distribution of amounts that were earned and vested (within the meaning of Code section 409A and regulations thereunder) under the Plan prior to 2005 (and earnings thereon) and are exempt from the requirements of Code section 409A. Thus,

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this Section 6.1 does not apply to these pre-2005 deferrals, but does apply to all other amounts deferred under the Plan.

(a) Separate Distribution Election. A Participant must make a separate distribution election for each year beginning with the 2005 deferral election. A Participant generally makes a distribution election at the same time the Participant makes the deferral election, i.e., during the Open Enrollment Period. The Participant will specify in the distribution election whether the amounts deferred for the year (and earnings thereon) will be paid upon a Separation from Service or upon a specified date, and the method of distribution for such amounts. Even if a Participant elects to have a year's deferrals payable upon a specified date, he shall also specify a method of distribution for payments upon a Separation from Service.

(b) Distribution Upon Separation from Service. A Participant may elect on a deferral form to have the portion of his Account related to amounts deferred under the deferral form (and earnings thereon) distributed in a lump sum or in quarterly installments over a period of 5, 10, or 15 years. If a Participant does not elect a method for distribution for a deferred amount, the amount will be distributed in quarterly installments over 10 years. Notwithstanding the foregoing, if a Participant's Account balance is \$50,000 or less at the time the Participant Separates from Service or if the Separation from Service occurs before age 55 for reasons other than death or disability (as defined under Code section 409A), the deferred amount will be distributed in a lump sum payment.

A lump sum payment shall be made in the second month following the month of Separation from Service. Installment payments shall commence as of the January, April, July, or October that next follows the month of Separation from Service and that is not the month immediately following the month of Separation from Service. For example, if a Separation from Service occurs in January, payments begin in April. If a Separation from Service occurs in March, payments begin in July.

Notwithstanding the foregoing, distributions may not be made to a Key Employee upon a Separation from Service before the date which is six months after the date of the Key Employee's Separation from Service (or, if earlier, the date of death of the Key Employee). Any lump sum payment that would otherwise be made during this period of delay shall be paid on the first day of the seventh month following the Participant's Separation from Service (or, if earlier, the first day of the month after the Participant's death). Any series of installment payments impacted by this delay shall begin as of the January, April, July, or October coincident with or next following the Participant's Separation from Service. The initial payment of such an installment series shall include any installment payments that would have otherwise been made during the period of delay.

(c) Distribution as of Specified Date. A Participant may elect on a deferral form to have the portion of his Account related to amounts deferred under the deferral form (and earnings thereon) paid to the Participant as of a January that is at least two years after the year of deferral. The Participant may elect to receive such amount as a lump sum or in quarterly installments over 2 to 5 years. If the amount is \$25,000 or less at the specified date for distribution, the Participant will receive a lump sum distribution of the amount regardless of his

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elected distribution form. If the Participant Separates from Service before the specified date or while receiving a distribution of an amount under this Section 6.1(c), such portion of the Account will be distributed in accordance with the Participant's distribution election for a Separation from Service made at the time of the Participant's deferral election.

(d) Changes in Time or Form of Distribution. A Participant may make up to two subsequent elections to change the time or form of a distribution for any year's deferral. Such an election, however, shall be effective only if the following conditions are satisfied:

(1) The election may not take effect until at least twelve (12) months after the date on which the election is made;

(2) In the case of an election to change the time or form of the distribution under Sections 6.1(b) or (c), a distribution may not be made earlier than at least five (5) years from the date the distribution would have otherwise been made; and

(3) In the case of an election to change the time or form of a distribution under Section 6.1(c), the election must be made at least twelve (12) months before the date the distribution is scheduled to be paid.

(e) Effect of Taxation. If Plan benefits are includible in the income of a Participant under Code section 409A prior to actual receipt of the benefits, the Administrative Committee shall immediately distribute the benefits found to be so includible to the Participant.

(f) Permitted Delays. Notwithstanding the foregoing, any payment to a Participant under the Plan shall be delayed upon the Committee's reasonable anticipation of one or more of the following events:

(1) The Company's deduction with respect to such payment would be eliminated by application of Code section 162(m); or

(2) The making of the payment would violate Federal securities laws or other applicable law;

provided, that any payment delayed pursuant to this Section 6.1(f) shall be paid in accordance with Code section 409A.

## 6.2 Withdrawals for Unforeseeable Emergency

A Participant may withdraw all or any portion of his Account balance for an Unforeseeable Emergency. The amounts distributed with respect to an Unforeseeable Emergency may not exceed the amounts necessary to satisfy such Unforeseeable Emergency plus amounts necessary to pay taxes reasonably anticipated as a result of the distribution, after taking into account the extent to which such hardship is or may be relieved through reimbursement or compensation by insurance or otherwise or by liquidation of the Participant's assets (to the extent the liquidation of such assets would not itself cause severe financial hardship) or by cessation of deferrals under the Plan. "Unforeseeable Emergency" means for this purpose a severe financial

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hardship to a Participant resulting from an illness or accident of the Participant, the Participant's spouse, or a dependent (as defined in Code section 152(a)) of the Participant, loss of the Participant's property due to casualty, or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant.

6.3 Payments Not Received At Death

In the event of the death of a Participant before receiving a payment, payment will be made to his or her estate if death occurs on or after the date of a check which has been issued by the Plan. Otherwise, payment of the amount will be made to the Participant's Beneficiary.

6.4 Inability to Locate Participant

In the event that the Administrative Committee is unable to locate a Participant or Beneficiary within two years following the required payment date, the amount allocated to the Participant's Account shall be forfeited. If, after such forfeiture, the Participant or Beneficiary later claims such benefit, such benefit shall be reinstated without interest or earnings for the forfeiture period.

6.5 Committee Rules

All distributions are subject to the rules and procedures of the Administrative Committee. The Administrative Committee may also require the use of particular forms. The Administrative Committee may change its rules, procedures and forms from time to time and without prior notice to Participants.

**ARTICLE VII**

**ADMINISTRATION**

7.1 Committees

(a) An Administrative Committee of one or more persons, shall be appointed by, and serve at the pleasure of, the Chairman and Chief Executive Officer. The number of members comprising the Administrative Committee shall be determined by the Chairman, President, and Chief Executive Officer, who may from time to time vary the number of members. A member of the Administrative Committee may resign by delivering a written notice of resignation to the Chairman, President, and Chief Executive Officer. The Chairman, President, and Chief Executive Officer may remove any member by delivering a certified copy of its resolution of removal to such member. Vacancies in the membership of the Administrative Committee shall be filled promptly by the Chairman, President, and Chief Executive Officer.

(b) An Investment Committee of one or more persons, shall be appointed by, and serve at the pleasure of, the Board. The number of members comprising the Investment Committee shall be determined by the Board, who may from time to time vary the number of members. A member of the Investment Committee may resign by delivering a written notice of

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resignation to the Board. The Board may remove any member by delivering a certified copy of its resolution of removal to such member. Vacancies in the membership of the Investment Committee shall be filled promptly by the Board.

### 7.2 Committee Action

Each Committee shall act at meetings by affirmative vote of a majority of the members of that Committee. Any action permitted to be taken at a meeting may be taken without a meeting if, prior to such action, a written consent to the action is signed by all members of the Committee and such written consent is filed with the minutes of the proceedings of the Committee. A member of a Committee shall not vote or act upon any matter which relates solely to himself or herself as a Participant. The chairman of a Committee, or any other member or members of each Committee designated by the chairman of the Committee, may execute any certificate or other written direction on behalf of the Committee of which he or she is a member.

### 7.3 Powers and Duties of the Administrative Committee

The Administrative Committee shall enforce the Plan in accordance with its terms, shall be charged with the general administration of the Plan, and shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

- (a) To construe and interpret the terms and provisions of this Plan;
- (b) To compute and certify to the amount and kind of benefits payable to Participants and their Beneficiaries;
- (c) To maintain all records that may be necessary for the administration of the Plan;
- (d) To provide for the disclosure of all information and the filing or provision of all reports and statements to Participants, Beneficiaries or governmental agencies as shall be required by law;
- (e) To make and publish such rules for the regulation of the Plan and procedures for the administration of the Plan as are not inconsistent with the terms hereof;
- (f) To appoint a Plan administrator or any other agent, and to delegate to them such powers and duties in connection with the administration of the Plan as the Administrative Committee may from time to time prescribe (including the power to subdelegate);
- (g) To exercise powers granted the Administrative Committee under other Sections of the Plan; and
- (h) To take all actions necessary for the administration of the Plan, including determining whether to hold or discontinue insurance policies purchased in connection with the Plan.



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7.4 Powers and Duties of the Investment Committee

The Investment Committee, shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

(a) To select types of investment and the actual investments against which earnings and losses will be measured;

(b) To oversee any rabbi trust; and

(c) To appoint agents, and to delegate to them such powers and duties in connection with its duties as the Investment Committee may from time to time prescribe (including the power to subdelegate).

7.5 Construction and Interpretation

The Administrative Committee shall have full discretion to construe and interpret the terms and provisions of this Plan and to remedy possible inconsistencies and omissions. The Administrative Committee's interpretations, constructions and remedies shall be final and binding on all parties, including but not limited to the Affiliated Companies and any Participant or Beneficiary. The Administrative Committee shall administer such terms and provisions in a uniform and nondiscriminatory manner and in full accordance with any and all laws applicable to the Plan.

7.6 Information

To enable the Committees to perform their functions, the Affiliated Companies adopting the Plan shall supply full and timely information to the Committees on all matters relating to the Compensation of all Participants, their death or other events which cause termination of their participation in this Plan, and such other pertinent facts as the Committees may require.

7.7 Committee Compensation, Expenses and Indemnity

(a) The members of the Committees shall serve without compensation for their services hereunder.

(b) The Committees are authorized to employ such legal counsel as they may deem advisable to assist in the performance of their duties hereunder.

(c) To the extent permitted by ERISA and applicable state law, the Company shall indemnify and hold harmless the Committees and each member thereof, the Board and any delegate of the Committees who is an employee of the Affiliated Companies against any and all expenses, liabilities and claims, including legal fees to defend against such liabilities and claims arising out of their discharge in good faith of responsibilities under or incident to the Plan, other than expenses and liabilities arising out of willful misconduct. This indemnity shall not preclude such further indemnities as may be available under insurance purchased by the Company or

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provided by the Company under any bylaw, agreement or otherwise, as such indemnities are permitted under ERISA and state law.

7.8 Disputes

The Company's standardized "Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures" shall apply in handling claims and appeals under the Plan.

**ARTICLE VIII**

**MISCELLANEOUS**

8.1 Unsecured General Creditor

Participants and their Beneficiaries, heirs, successors, and assigns shall have no legal or equitable rights, claims, or interest in any specific property or assets of the Affiliated Companies. No assets of the Affiliated Companies shall be held in any way as collateral security for the fulfilling of the obligations of the Affiliated Companies under this Plan. Any and all of the Affiliated Companies' assets shall be, and remain, the general unpledged, unrestricted assets of the Affiliated Companies. The obligation under the Plan of the Affiliated Companies adopting the Plan shall be merely that of an unfunded and unsecured promise of those Affiliated Companies to pay money in the future, and the rights of the Participants and Beneficiaries shall be no greater than those of unsecured general creditors. It is the intention of the Affiliated Companies that this Plan be unfunded for purposes of the Code and for purposes of Title I of ERISA.

8.2 Restriction Against Assignment

(a) The Company shall pay all amounts payable hereunder only to the person or persons designated by the Plan and not to any other person or corporation. No part of a Participant's Accounts shall be liable for the debts, contracts, or engagements of any Participant, his or her Beneficiary, or successors in interest, nor shall a Participant's Accounts be subject to execution by levy, attachment, or garnishment or by any other legal or equitable proceeding, nor shall any such person have any right to alienate, anticipate, sell, transfer, commute, pledge, encumber, or assign any benefits or payments hereunder in any manner whatsoever. If any Participant, Beneficiary or successor in interest is adjudicated bankrupt or purports to anticipate, alienate, sell, transfer, commute, assign, pledge, encumber or charge any distribution or payment from the Plan, voluntarily or involuntarily, the Administrative Committee, in its discretion, may cancel such distribution or payment (or any part thereof) to or for the benefit of such Participant, Beneficiary or successor in interest in such manner as the Administrative Committee shall direct.

(b) The actions considered exceptions to the vesting rule under Section 5.2 will not be treated as violations of this Section.

(c) Notwithstanding the foregoing, all or a portion of a Participant's Account balance may be paid to another person as specified in a domestic relations order that the

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Administrative Committee determines is qualified (a “Qualified Domestic Relations Order”). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

- (1) issued pursuant to a State’s domestic relations law;
- (2) relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the Participant;
- (3) creates or recognizes the right of a spouse, former spouse, child or other dependent of the Participant to receive all or a portion of the Participant’s benefits under the Plan; and
- (4) meets such other requirements established by the Administrative Committee.

The Administrative Committee shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the Administrative Committee may consider the rules applicable to “domestic relations orders” under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

### 8.3 Restriction Against Double Payment

If a court orders an assignment of benefits despite the previous Section, the affected Participant’s benefits will be reduced accordingly. The Administrative Committee may use any reasonable actuarial assumptions to accomplish the offset under this Section.

### 8.4 Withholding

There shall be deducted from each payment made under the Plan or any other Compensation payable to the Participant (or Beneficiary) all taxes which are required to be withheld by the Affiliated Companies in respect to such payment or this Plan. The Affiliated Companies shall have the right to reduce any payment (or compensation) by the amount of cash sufficient to provide the amount of said taxes.

### 8.5 Amendment, Modification, Suspension or Termination

The Administrative Committee may amend, modify, suspend or terminate the Plan in whole or in part, except that no amendment, modification, suspension or termination may reduce a Participant’s Account balance below its dollar value immediately prior to the amendment. The preceding sentence is not intended to protect Participants against investment losses. Upon termination of the Plan, distribution of balances in Accounts shall be made to Participants and Beneficiaries in the manner and as the time described in Article VI, unless the Company determines in its sole discretion that all such amounts shall be distributed upon termination in accordance with the requirements under Code section 409A.

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Notwithstanding the foregoing, no amendment of the Plan shall apply to amounts that were earned and vested (within the meaning of Code section 409A and regulations thereunder) under the Plan prior to 2005, unless the amendment specifically provides that it applies to such amounts. The purpose of this restriction is to prevent a Plan amendment from resulting in an inadvertent “material modification” to amounts that are “grandfathered” and exempt from the requirements of Code section 409A.

8.6 Governing Law

To the extent not preempted by ERISA, this Plan shall be construed, governed and administered in accordance with the laws of Delaware.

8.7 Receipt or Release

Any payment to a Participant or the Participant’s Beneficiary in accordance with the provisions of the Plan shall, to the extent thereof, be in full satisfaction of all claims against the Committees and the Affiliated Companies. The Administrative Committee may require such Participant or Beneficiary, as a condition precedent to such payment, to execute a receipt and release to such effect.

8.8 Payments on Behalf of Persons Under Incapacity

In the event that any amount becomes payable under the Plan to a person who, in the sole judgment of the Administrative Committee, is considered by reason of physical or mental condition to be unable to give a valid receipt therefore, the Administrative Committee may direct that such payment be made to any person found by the Committee, in its sole judgment, to have assumed the care of such person. Any payment made pursuant to such determination shall constitute a full release and discharge of the Administrative Committee and the Company.

8.9 Limitation of Rights and Employment Relationship

Neither the establishment of the Plan, any Trust nor any modification thereof, nor the creating of any fund or account, nor the payment of any benefits shall be construed as giving to any Participant, or Beneficiary or other person any legal or equitable right against the Affiliated Companies or any trustee except as provided in the Plan and any trust agreement; and in no event shall the terms of employment of any Employee or Participant be modified or in any way be affected by the provisions of the Plan and any trust agreement.

8.10 Headings

Headings and subheadings in this Plan are inserted for convenience of reference only and are not to be considered in the construction of the provisions hereof.

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8.11 2001 Reorganization

Effective as of the 2001 Reorganization Date in (d), the corporate structure of Northrop Grumman Corporation and its affiliates was modified. Effective as of the Litton Acquisition Date in (e), Litton Industries, Inc. was acquired and became a subsidiary of the Northrop Grumman Corporation (the “Litton Acquisition”).

(a) The former Northrop Grumman Corporation was renamed Northrop Grumman Systems Corporation. It became a wholly-owned subsidiary of the new parent of the reorganized controlled group.

(b) The new parent corporation resulting from the restructuring is called Northrop Grumman Corporation. All references in this Plan to the former Northrop Grumman Corporation and its Board of Directors now refer to the new parent corporation bearing the same name and its Board of Directors.

(c) As of the 2001 Reorganization Date, the new Northrop Grumman Corporation became the sponsor of this Plan, and its Board of Directors assumed authority over this Plan.

(d) 2001 Reorganization Date. The date as of which the corporate restructuring described in (a) and (b) occurred.

(e) Litton Acquisition Date. The date as of which the conditions for the completion of the Litton Acquisition were satisfied in accordance with the “Amended and Restated Agreement and Plan of Merger Among Northrop Grumman Corporation, Litton Industries, Inc., NNG, Inc., and LII Acquisition Corp.

8.12 Liabilities Transferred to HII

Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. (“HII) to its shareholders on March 31, 2011 (the “HII Distribution Date”). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Plan and the liabilities for these participants’ benefits under the Plan were transferred to HII. On and after the HII Distribution Date, the Company and the Plan, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Plan.

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IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard

Denise Peppard

Corporate Vice President and Chief Human Resources Officer

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**APPENDIX A**

**2005 TRANSITION RELIEF**

The following provisions apply only during 2005, pursuant to transition relief granted in IRS Notice 2005-1:

**A.1 Cash-Out**

Participants Separating from Service during 2005 for any reason before age 55 will receive an immediate lump sum distribution of their Account balances. Other Participants Separating from Service in 2005 will receive payments in accordance with their prior elections.

**A.2 Elections**

During the Plan's open enrollment period in June 2005 Participants may fully or partially cancel 2005 deferral elections and receive in 2005 a refund of amounts previously deferred in 2005.

In addition, individuals working in Company facilities impacted by Hurricane Katrina may stop or reduce 2005 elective contributions to the Plan at any time during 2005. All payments under this Section A.2 will be made before the end of calendar year 2005.

**A.3 Key Employees**

Key Employees Separating from Service on or after July 1, 2005, with distributions subject to Code section 409A and scheduled for payment in 2006 within six months of Separation from Service, may choose I or II below, subject to III:

- I. Delay the distributions described above for six months from the date of Separation from Service. The delayed payments will be paid as a single sum with interest at the end of the six month period, with the remaining payments resuming as scheduled.
- II. Accelerate the distributions described above into a payment in 2005 without interest adjustments.
- III. Key Employees must elect I or II during 2005.

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**APPENDIX B**

**DISTRIBUTION RULES FOR PRE-2005 AMOUNTS**

Distribution of amounts earned and vested (within the meaning of Code section 409A and regulations thereunder) under the Plan prior to 2005 (and earnings thereon) are exempt from the requirements of Code section 409A and shall be made in accordance with the Plan terms as in effect on December 31, 2004 and as summarized in the following provisions.

**B.1 Distribution of Contributions**

**(a) Distributions Upon Early Termination**

(1) Voluntary Termination. If a Participant voluntarily terminates employment with the Affiliated Companies before age 55 or Disability, distribution of his or her Account will be made in a lump sum on the Participant's Payment Date.

(2) Involuntary Termination. If a Participant involuntarily terminates employment with the Affiliated Companies before age 55, distribution of his or her Account will generally be made in quarterly installments over a 5, 10 or 15-year period, commencing on the Participant's Payment Date, in accordance with the Participant's original election on his or her deferral election form. Payment will be made in a lump sum if the Participant had originally elected a lump sum, if the Account balance is \$50,000 or less, or if the Administrative Committee so requires.

(b) Distribution After Retirement, Disability or Death. In the case of a Participant who separates from service with the Affiliated Companies on account of Retirement, Disability or death and has an Account balance of more than \$50,000, the Account shall be paid to the Participant (and after his or her death to his or her Beneficiary) in substantially equal quarterly installments over 10 years commencing on the Participant's Payment Date.

(1) An optional form of benefit may be elected by the Participant, on the form provided by Administrative Committee, during his or her initial election period from among those listed below:

- (A) A lump sum distribution on the Participant's Payment Date.
- (B) Quarterly installments over 5 years beginning on the Participant's Payment Date.
- (C) Quarterly installments over 10 years beginning on the Participant's Payment Date.



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(D) Quarterly installments over 15 years beginning on the Participant's Payment Date.

(2) A Participant from time to time may modify the form of benefit that he or she has previously elected. Upon his or her separation from service, the most recently elected form of distribution submitted at least 12 months prior to separation will govern. If no such election exists, distributions will be paid under the 10-year installment method.

(3) In the case of a Participant who terminates employment with the Affiliated Companies on account of Retirement, Disability or death with an Account balance of \$50,000 or less, the Account shall be paid to the Participant in a lump sum distribution on the Participant's Payment Date.

(4) In general, upon the Participant's death, payment of any remaining Account balance will be made to the Beneficiary in a lump sum on the Payment Date. But the Beneficiary will receive any remaining installments (starting on the Payment Date) if the Participant was receiving installments, or if the Participant died on or after age 55 with an Account balance over \$50,000 and with an effective installment payout election in place. In such cases, the Beneficiary may still elect a lump sum payment of the remaining Account balance, but only with the Administrative Committee's consent.

(c) Distribution With Scheduled Withdrawal Date. A Participant who has elected a Scheduled Withdrawal Date for a distribution while still in the employ of the Affiliated Companies, will receive the designated portion of his or her Account as follows:

(1) A Participant's Scheduled Withdrawal Date can be no earlier than two years from the last day of the Plan Year for which the deferrals of Compensation are made.

(2) A Participant may extend the Scheduled Withdrawal Date for any Plan Year, provided such extension occurs at least one year before the Scheduled Withdrawal Date and is for a period of not less than two years from the Scheduled Withdrawal Date. The Participant shall have the right to twice modify any Scheduled Withdrawal Date.

(3) Payments under this subsection may be in the form of a lump sum, or 2, 3, 4 or 5-year quarterly installments. The default form will be a lump sum. If the Account balance to be distributed is \$25,000 or less, payment will automatically be made in a lump sum. Payments will commence on the Scheduled Withdrawal Date.

(4) In the event a Participant terminates employment with the Affiliated Companies prior to the commencement or completion of a distribution under this subsection, the portion of the Participant's Account associated with a Scheduled Withdrawal Date which has not been distributed prior to such termination shall be distributed in accordance with Section B.1(a) and (b) along with the remainder of the Account.

## B.2 Early Non-Scheduled Distributions

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A Participant shall be permitted to elect an Early Distribution from his or her Account prior to a Payment Date under Section B.1, subject to the following restrictions:

(a) The election to take an Early Distribution shall be made by filing a form provided by and filed with the Administrative Committee prior to the end of any calendar month.

(b) The amount of the Early Distribution shall equal up to 90% of his or her Account balance.

(c) The amount described in subsection (b) above shall be paid in a lump sum as of a date after the receipt by the Administrative Committee of the request for a withdrawal under this Section. The exact date will be determined by the Administrative Committee to allow time for administrative processing.

(d) A Participant shall forfeit 10% of the amount of the requested distribution. The Affiliated Companies shall have no obligation to the Participant or his or her Beneficiary with respect to such forfeited amount.

(1) Example 1: A Participant requests a distribution of 100% of the Account. The Participant receives 90%. The amount forfeited is 10% of the Account.

(2) Example 2: A Participant requests a distribution of 50% of the Account. The Participant receives 45%. The amount forfeited is 5% of the Account.

(e) All distributions shall be made on a pro rata basis from among a Participant's investment subaccounts.

### B.3 Hardship Distribution

A Participant shall be permitted to elect a Hardship Distribution from his or her Account prior to a Payment Date under Section B.1, subject to the following restrictions:

(a) The election to take a Hardship Distribution shall be made by filing a form provided by and filed with the Administrative Committee prior to the end of any calendar month.

(b) The Administrative Committee shall have made a determination that the requested distribution constitutes a Hardship Distribution.

(c) The amount determined by the Administrative Committee as a Hardship Distribution shall be paid in a lump sum as of a date after the approval by the Administrative Committee of the request for a withdrawal under this Section. The exact date will be determined by the Administrative Committee to allow time for administrative processing.

### B.4 Plan Termination

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In the event that this Plan is terminated, the amounts allocated to a Participant's Account shall be distributed to the Participant or, in the event of his or her death, to his or her Beneficiary in a lump sum.

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APPENDIX C

**TRANSFER OF LIABILITIES –**  
**NORTHROP GRUMMAN EXECUTIVE DEFERRED COMPENSATION PLAN**

C.1 Background

Effective March 1, 2001, all liabilities under the Northrop Grumman Executive Deferred Compensation Plan other than the Estate Enhancement Program Account, were transferred to this Plan. This Appendix describes the treatment of those liabilities (plus earnings) (“Transferred Liabilities”) and the Participant to whom those liabilities are owed (“Transferred Participant”).

C.2 Treatment of Transferred Liabilities

The Transferred Liabilities will generally be treated under the Plan like Compensation deferred in accordance with Article III.

C.3 Investments

The Transferred Participant may make investment elections for the Transferred Liabilities in accordance with Section 3.3. Section 3.4 will also apply.

C.4 Distributions

Distributions of amounts corresponding to the Transferred Liabilities will generally be made in accordance with the provisions of Appendix B. The following exceptions and special rules apply:

(a) Section B.1

(1) For purposes of Sections B.1(a)(2) and B.1(b)(1), the Transferred Participant will be deemed to have made an election of 5 or 10-year installments corresponding to his elections of 5 or 10-year installments under Section 6.9(b)(2) of the Northrop Grumman Executive Deferred Compensation Plan.

(2) The Transferred Participant may utilize Section B.1(b)(2) to vary the form of his distribution.

(3) Distributions under Section B.1(c) are not available.

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(b) Section B.2. The Early Non-Scheduled Distribution election is available. The Transferred Liabilities will be aggregated with any other amounts in the Transferred Participant's Account for purposes of distributions under Section B.2.

(c) Sections 6.3-6.6. These Sections are fully applicable.

C.5 Other Provisions

The Transferred Liabilities and the Transferred Participant will be fully subject to the provisions of Articles IV, V, VII and VIII.

APPENDIX D

**TRANSFER OF LIABILITIES –  
AEROJET-GENERAL LIABILITIES**

D.1 Background

(a) Effective as of the Closing Date specified in the April 19, 2001 Asset Purchase Agreement by and Between Aerojet-General Corporation and Northrop Grumman Systems Corporation (the “APA”), certain liabilities (“Transferred Liabilities”) under the Benefits Restoration Plan for Salaried Employees of GenCorp Inc. and Certain Subsidiary Companies and the GenCorp Inc. and Participating Subsidiaries Deferred Bonus Plan were transferred to this Plan.

(b) The transfer took place pursuant to section 10.6 of the APA, under which Northrop Grumman acquired the Azusa and Colorado Operations units from Aerojet-General Corporation. That section reads:

\* \* \* \* \*

10.6 Unfunded Deferred Compensation

(a) Subject to legal requirements for employee acquiescence, as of the effective time of the Closing, the Purchaser shall assume any and all obligations of the Seller to pay any and all unfunded deferred compensation as set forth on Schedule 10.6 for all Transferring Employees, provided such benefits are adequately reflected on the Balance Sheet.

(b) The Seller shall retain any and all legal obligation to pay any and all unfunded deferred compensation for all Aerojet Employees that are not Transferring Employees.

\* \* \* \* \*

(c) This Appendix is intended to effectuate the assumption of certain of the liabilities contemplated by section 10.6 of the APA. It describes the treatment of those liabilities (plus earnings) and the Participants to whom those liabilities are owed (“Transferred Participants”).

(d) The only liabilities assumed by this Plan are:

(1) those from the GenCorp Inc. and Participating Subsidiaries Deferred Bonus Plan, and

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(2) those liabilities under the Benefits Restoration Plan for Salaried Employees of GenCorp Inc. and Certain Subsidiary Companies which represent supplements with respect to an Aerojet defined contribution plan.

No liabilities are assumed which represent supplements with respect to an Aerojet defined benefit plan.

(e) The assumed liabilities will be represented by starting Account balances for the Transferred Participants, determined in the discretion of the Administrative Committee.

D.2 Treatment of Transferred Liabilities

The Transferred Liabilities will generally be treated under the Plan like Compensation deferred in accordance with Article III.

D.3 Investments

The Transferred Participants may make investment elections for the Transferred Liabilities in accordance with Section 3.3. Section 3.4 will also apply.

D.4 Distributions

Distributions of amounts corresponding to the Transferred Liabilities will generally be made in accordance with the provisions of Appendix B. The following exceptions and special rules apply:

(a) Section B.1

(1) For purposes of Sections B.1(a)(2) and B.1(b)(1), the Transferred Participants will be deemed to have made an election of 10-year installments.

(2) The Transferred Participants may utilize Section B.1(b)(2) to vary the form of their distributions.

(3) Distributions under Section B.1(c) are not available.

(b) Section B.2. The Early Non-Scheduled Distribution election is available. The Transferred Liabilities will be aggregated with any other amounts in the Transferred Participants' Accounts for purposes of distributions under Section B.2.

(c) Sections 6.3-6.6. These Sections are fully applicable.

D.5 Other Provisions

The Transferred Liabilities and the Transferred Participants will be fully subject to the provisions of Articles IV, V, VII and VIII.

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**APPENDIX E**

**TRANSFER OF LIABILITIES – TASC, INC. SUPPLEMENTAL  
RETIREMENT PLAN**

E.1 Background

(a) Effective as of the TASC Merger Date, all liabilities under the TASC, Inc. Supplemental Retirement Plan were transferred to this Plan. This Appendix describes the treatment of those liabilities (plus earnings) (“Transferred Liabilities”) and the Participant to whom those liabilities are owed (“Transferred Participant”).

(b) The “TASC Merger Date” is March 28, 2003 or such other date that the Northrop Grumman Director of Benefits Administration and Services determines is feasible. If the Northrop Grumman Director of Benefits Administration and Services determines that March 28, 2003 is not feasible, he shall identify in writing, before March 28, 2003, a date that is feasible.

E.2 Treatment of Transferred Liabilities

The Transferred Liabilities will generally be treated under the Plan like Compensation deferred in accordance with Article III.

E.3 Investments

The Transferred Participant may make investment elections for the Transferred Liabilities in accordance with Section 3.3. Section 3.4 will also apply.

E.4 Distributions

Distributions of amounts corresponding to the Transferred Liabilities will generally be made in accordance with the provisions of Appendix B.

E.5 Other Provisions

The Transferred Liabilities and the Transferred Participant will be fully subject to the provisions of Articles IV, V, VII and VIII.



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**APPENDIX F**

**2008 TRANSITION RELIEF**

Pursuant to transition rules under Code section 409A, during a specified period in 2008, Participants who had previously elected in 2008 to defer amounts that would otherwise be payable in 2009 may make a new election with respect to such amounts. Such an election must provide for a lower deferral percentage for each compensation category than the originally elected percentage. And if a Participant makes such an election, the Participant may also make a new distribution election (in accordance with the Plan's distribution rules in Section 6.1) for such amounts.

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**APPENDIX G**

**COMMITTEES AND APPOINTMENTS**

Notwithstanding anything to the contrary in this Plan, effective October 25, 2011, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Article VII of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

NORTHROP GRUMMAN

SAVINGS EXCESS PLAN

(Amended and Restated Effective as of January 1, 2012)

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## INTRODUCTION

The Northrop Grumman Savings Excess Plan (the "Plan") was last amended and restated effective as of January 1, 2011. This restatement amends that version of the Plan, and is effective January 1, 2012. This restatement includes changes that apply to amounts earned and vested under the Plan prior to 2005.

Northrop Grumman Corporation (the "Company") established this Plan for participants in the Northrop Grumman Savings Plan who exceed the limits under sections 401(a)(17) or 415(c) of the Internal Revenue Code. This Plan is intended (1) to comply with section 409A of the Internal Revenue Code, as amended (the "Code") and official guidance issued thereunder (except with respect to amounts covered by Appendix B), and (2) to be "a plan which is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of sections 201(2), 301(a)(3) and 401(a)(1) of the Employee Retirement Income Security Act of 1974. Notwithstanding any other provision of this Plan, this Plan shall be interpreted, operated and administered in a manner consistent with these intentions.

## **ARTICLE I**

### DEFINITIONS

#### 1.1 Definitions

Whenever the following words and phrases are used in this Plan, with the first letter capitalized, they shall have the meanings specified below.

(a) "Account" shall mean the recordkeeping account set up for each Participant to keep track of amounts to his or her credit.

(b) "Administrative Committee" means the committee in charge of Plan administration, as described in Article VII.

(c) "Affiliated Companies" shall mean the Company and any entity affiliated with the Company under Code sections 414(b) or (c).

(d) "Base Salary" shall mean a Participant's annual base salary, excluding bonuses, commissions, incentive and all other remuneration for services rendered to the Affiliated Companies and prior to reduction for any salary contributions to a plan established pursuant to section 125 of the Code or qualified pursuant to section 401(k) of the Code.

(e) "Basic Contributions" shall have the same meaning as that term is defined in the NGSP.

(f) "Beneficiary" or "Beneficiaries" shall mean the person or persons, including a trustee, personal representative or other fiduciary, last designated in writing by a

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Participant in accordance with procedures established by the Administrative Committee to receive the benefits specified hereunder in the event of the Participant's death.

(1) No Beneficiary designation shall become effective until it is filed with the Administrative Committee.

(2) Any designation shall be revocable at any time through a written instrument filed by the Participant with the Administrative Committee with or without the consent of the previous Beneficiary.

No designation of a Beneficiary other than the Participant's spouse shall be valid unless consented to in writing by such spouse. If there is no such designation or if there is no surviving designated Beneficiary, then the Participant's surviving spouse shall be the Beneficiary. If there is no surviving spouse to receive any benefits payable in accordance with the preceding sentence, the duly appointed and currently acting personal representative of the Participant's estate (which shall include either the Participant's probate estate or living trust) shall be the Beneficiary. In any case where there is no such personal representative of the Participant's estate duly appointed and acting in that capacity within 90 days after the Participant's death (or such extended period as the Administrative Committee determines is reasonably necessary to allow such personal representative to be appointed, but not to exceed 180 days after the Participant's death), then Beneficiary shall mean the person or persons who can verify by affidavit or court order to the satisfaction of the Administrative Committee that they are legally entitled to receive the benefits specified hereunder. Any payment made pursuant to such determination shall constitute a full release and discharge of the Plan, the Administrative Committee and the Company. Effective January 1, 2007, a Participant will automatically revoke a designation of a spouse as primary beneficiary upon the dissolution of their marriage.

(3) In the event any amount is payable under the Plan to a minor, payment shall not be made to the minor, but instead be paid (a) to that person's living parent(s) to act as custodian, (b) if that person's parents are then divorced, and one parent is the sole custodial parent, to such custodial parent, or (c) if no parent of that person is then living, to a custodian selected by the Administrative Committee to hold the funds for the minor under the Uniform Transfers or Gifts to Minors Act in effect in the jurisdiction in which the minor resides. If no parent is living and the Administrative Committee decides not to select another custodian to hold the funds for the minor, then payment shall be made to the duly appointed and currently acting guardian of the estate for the minor or, if no guardian of the estate for the minor is duly appointed and currently acting within 60 days after the date the amount becomes payable, payment shall be deposited with the court having jurisdiction over the estate of the minor. Any payment made pursuant to such determination shall constitute a full release and discharge of the Plan, the Administrative Committee and the Company.

(4) Payment by the Affiliated Companies pursuant to any unrevoked Beneficiary designation, or to the Participant's estate if no such designation exists, of all benefits owed hereunder shall terminate any and all liability of the Affiliated Companies.

(g) "Board" shall mean the Board of Directors of the Company.

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(h) "Bonuses" shall mean the bonuses earned under the Company's formal incentive plans as defined by the Administrative Committee.

(i) "Code" shall mean the Internal Revenue Code of 1986, as amended.

(j) "Committees" shall mean the Committees appointed as provided in Article VII.

(k) "Company" shall mean Northrop Grumman Corporation and any successor.

(l) "Company Contributions" shall mean contributions by the Company to a Participant's Account.

(m) "Compensation" shall be Compensation as defined by Section 5.01 of the NGSP.

(n) "Disability" or "Disabled" shall mean the Participant's inability to perform each and every duty of his or her occupation or position of employment due to illness or injury as determined in the sole and absolute discretion of the Administrative Committee.

(o) "Eligible Compensation" shall mean (1) Compensation prior to January 1, 2009, and (2) after 2008, Base Salary and Bonuses, reduced by the amount of any deferrals made from such amounts under the Northrop Grumman Deferred Compensation Plan.

(p) "Eligible Employee" shall mean any Employee who meets the following conditions:

(1) he or she is eligible to participate in the NGSP;

(2) he or she is classified by the Affiliated Companies as an Employee and not as an independent contractor; and

(3) he or she meets any additional eligibility criteria set by the Administrative Committee.

Additional eligibility criteria established by the Administrative Committee may include specifying classifications of Employees who are eligible to participate and the date as of which various groups of Employees will be eligible to participate. This includes, for example, Administrative Committee authority to delay eligibility for employees of newly acquired companies who become Employees.

(q) "Employee" shall mean any common law employee of the Affiliated Companies who is classified as an employee by the Affiliated Companies.

(r) "ERISA" shall mean the Employee Retirement Income Security Act of 1974, as it may be amended from time to time.



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(s) "Investment Committee" means the committee in charge of investment aspects of the Plan, as described in Article VII.

(t) "Key Employee" means an employee treated as a "specified employee" under Code section 409A(a)(2)(B)(i) of the Company or the Affiliated Companies (i.e., a key employee (as defined in Code section 416(i) without regard to paragraph (5) thereof) if the Company's or an Affiliated Company's stock is publicly traded on an established securities market or otherwise. The Company shall determine in accordance with a uniform Company policy which Participants are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be used. Such determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

(u) "NGSP" means the Northrop Grumman Savings Plan.

(v) "Open Enrollment Period" means the period designated by the Administrative Committee for electing deferrals for the following Plan Year.

(w) "Participant" shall mean any Eligible Employee who participates in this Plan in accordance with Article II or any Employee who is a RAC Participant.

(x) "Payment Date" shall mean:

(1) for distributions upon early termination under Section B.1(a), a date after the end of the month in which termination of employment occurs; and

(2) for distributions after Retirement, Disability or death under Section B.1(b), a date after the end of the month in which occurs Retirement, the determination of Disability by the Administrative Committee, or the notification of the Administrative Committee of the Participant's death (or later qualification of the Beneficiary or Beneficiaries), as applicable.

The exact date in each case will be determined by the Administrative Committee to allow time for administrative processing.

(y) "Plan" shall be the Northrop Grumman Savings Excess Plan.

(z) "Plan Year" shall be the calendar year.

(aa) "RAC Contributions" shall mean the Company contributions under Section 3.2(b)(2).

(bb) "RAC Participant" shall mean an Employee who is eligible to participate in the NGSP, receives Retirement Account Contributions under the NGSP, and is classified by the Affiliated Companies as an Employee and not as an independent contractor. Notwithstanding the foregoing, an Employee who becomes eligible to participate in the Officers Supplemental Executive Retirement Program II ("OSERP II") under the Northrop Grumman Supplemental Plan 2 shall immediately cease to be eligible for RAC Contributions.

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(cc) "RAC Subaccount" shall mean the portion of a Participant's Account made up of RAC Contributions and earnings thereon.

(dd) "Retirement" shall mean termination of employment with the Affiliated Companies after reaching age 55.

(ee) "Separation from Service" or "Separates from Service" or "Separating from Service" means a "separation from service" within the meaning of Code section 409A.

## **ARTICLE II**

### **PARTICIPATION**

#### **2.1 In General**

(a) An Eligible Employee may become a Participant by complying with the procedures established by the Administrative Committee for enrolling in the Plan. Anyone who becomes an Eligible Employee will be entitled to become a Participant during an Open Enrollment Period.

(b) A RAC Participant will become a Participant when RAC Contributions are first made to his or her RAC Subaccount.

(c) An individual will cease to be a Participant when he or she no longer has a positive balance to his or her Account under the Plan.

#### **2.2 Disputes as to Employment Status**

(a) Because there may be disputes about an individual's proper status as an Employee or non-Employee, this Section describes how such disputes are to be handled with respect to Plan participation.

(b) The Affiliated Companies will make the initial determination of an individual's employment status.

(1) If an individual is not treated by the Affiliated Companies as a common law employee, then the Plan will not consider the individual to be an "Eligible Employee" and he or she will not be entitled to participate in the Plan.

(2) This will be so even if the individual is told he or she is entitled to participate in the Plan and given a summary of the plan and enrollment forms or other actions are taken indicating that he or she may participate.

(c) Disputes may arise as to an individual's employment status. As part of the resolution of the dispute, an individual's status may be changed by the Affiliated Companies from non-Employee to Employee. Such Employees are not Eligible Employees and will not be entitled to participate in the Plan.

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**ARTICLE III**  
**DEFERRAL ELECTIONS**

3.1 Elections to Defer Eligible Compensation

(a) Timing. An Eligible Employee who meets the requirements of Section 2.1(a) may elect to defer Eligible Compensation earned in a Plan Year by filing an election in the Open Enrollment Period for the Plan Year. An election to participate for a Plan Year is irrevocable.

(b) Election Rules. An Eligible Employee's election may be made in writing, electronically, or as otherwise specified by the Administrative Committee. Such election shall specify the Eligible Employee's rate of deferral for contributions to the Plan, which shall be between 1% and 75%, and shall address distribution of the deferred amounts as described in Section 6.1. All elections must be made in accordance with the rules, procedures and forms provided by the Administrative Committee. The Administrative Committee may change the rules, procedures and forms from time to time and without prior notice to Participants.

(c) Cancellation of Election. If a Participant becomes disabled (as defined under Code section 409A) during a Plan Year, his deferral election for such Plan Year shall be cancelled.

3.2 Contribution Amounts

(a) Participant Contributions. An Eligible Employee's contributions under the Plan for a Plan Year will begin once his or her Compensation for the Plan Year exceeds the Code section 401(a)(17) limit for the Plan Year. The Participant's elected deferral percentage will be applied to his or her Eligible Compensation for the balance of the Plan Year.

(b) Company Contributions. The Company will make Company Contributions to a Participant's Account as provided in (1), (2) and (3) below.

(1) Matching Contributions. The Company will make a Company Contribution equal to the matching contribution rate for which the Participant is eligible under the NGSP for the Plan Year multiplied by the amount of the Participant's contributions under subsection (a).

(2) RAC Contributions. Effective July 1, 2008, the Company will make RAC Contributions equal to a percentage of a RAC Participant's Compensation for a Plan Year in excess of the Code section 401(a)(17) limit. The percentage used to calculate a RAC Participant's contribution for a Plan Year shall be based on the RAC Participant's age on the last day of the Plan Year as follows:

- (i) Three percent if not yet age 35.
- (ii) Four percent if 35 or older, but not yet 50.

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(iii) Five percent if age 50 or older.

(3) Make-Up Contributions for Contribution Limitation. If an Eligible Employee's Basic Contributions under the NGSP for a Plan Year are limited by the Code section 415(c) contribution limit before the Eligible Employee's Basic Contributions under the NGSP are limited by the Code section 401(a)(17) compensation limit, the Company will make a Company Contribution equal to the amount of matching contributions for which the Eligible Employee would have been eligible under the NGSP were Code section 415(c) not applied, reduced by the actual amount of matching contributions made for the Plan Year under the NGSP.

### 3.3 Crediting of Deferrals

Amounts deferred by a Participant under the Plan shall be credited to the Participant's Account as soon as practicable after the amounts would have otherwise been paid to the Participant. Company contributions other than those under Section 3.2(b)(3) will be credited to Accounts as soon as practicable after each payroll cycle in which they accrue. Company contributions under Section 3.2(b)(3) will be credited to Accounts as soon as practicable after each Plan Year.

### 3.4 Maximum Contributions

Effective January 1, 2011, the total amount of contributions under Sections 3.2(a) and (b) made to the Plan on behalf of each Corporate Policy Council member ("CPC Participant") shall not exceed \$5 million (the "Lifetime Cap"). The following items will not count toward the Lifetime Cap:

(a) investment gains or earnings, and (b) amounts originally contributed to other plans that have been or are merged into the Plan. Notwithstanding the foregoing, Company Contributions shall continue to be made to a CPC Participant's Account until the end of the Plan Year in which the CPC Participant reaches the Lifetime Cap, and any deferral election made by a CPC Participant that is irrevocable under Code section 409A on the date the Lifetime Cap is reached shall remain effective.

### 3.5 Investment Elections

(a) The Investment Committee will establish a number of different investment funds or other investment options for the Plan. The Investment Committee may change the funds or other investment options from time to time, without prior notice to Participants.

(b) Participants may elect how their future contributions and existing Account balances will be deemed invested in the various investment funds and may change their elections from time to time. If a Participant does not elect how future contributions will be deemed invested, contributions will be deemed invested in the qualified default investment alternative ("QDIA") that applies to the Participant under the NGSP.

(c) The deemed investments for a RAC Participant's RAC Subaccount must be the same as the deemed investments for the RAC Participant's Company contributions under Section 3.2(b)(1).

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(d) Selections of investments, changes and transfers must be made according to the rules and procedures of the Administrative Committee.

(1) The Administrative Committee may prescribe rules that may include, among other matters, limitations on the amounts that may be transferred and procedures for electing transfers.

(2) The Administrative Committee may prescribe valuation rules for purposes of investment elections and transfers. Such rules may, in the Administrative Committee's discretion, use averaging methods to determine values and accrue estimated expenses. The Administrative Committee may change the methods it uses for valuation from time to time.

(3) The Administrative Committee may prescribe the periods and frequency with which Participants may change deemed investment elections and make transfers.

(4) The Administrative Committee may change its rules and procedures from time to time and without prior notice to Participants.

(e) Effective January 13, 2011, Participant investment elections involving a Company stock investment fund (e.g., transfers into or out of the fund) may be restricted, including in accordance with Company policies generally applicable to employee transactions in Company stock.

### 3.6 Investment Return Not Guaranteed

Investment performance under the Plan is not guaranteed at any level. Participants may lose all or a portion of their contributions due to poor investment performance.

## **ARTICLE IV**

### **ACCOUNTS**

#### 4.1 Accounts

The Administrative Committee shall establish and maintain a recordkeeping Account for each Participant under the Plan.

#### 4.2 Valuation of Accounts

The valuation of Participants' recordkeeping Accounts will reflect earnings, losses, expenses and distributions, and will be made in accordance with the rules and procedures of the Administrative Committee.

(a) The Administrative Committee may set regular valuation dates and times and also use special valuation dates and times and procedures from time to time under unusual circumstances and to protect the financial integrity of the Plan.

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(b) The Administrative Committee may use averaging methods to determine values and accrue estimated expenses.

(c) The Administrative Committee may change its valuation rules and procedures from time to time and without prior notice to Participants.

4.3 Use of a Trust

The Company may set up a trust to hold any assets or insurance policies that it may use in meeting its obligations under the Plan. Any trust set up will be a rabbi trust and any assets placed in the trust shall continue for all purposes to be part of the general assets of the Company and shall be available to its general creditors in the event of the Company's bankruptcy or insolvency.

**ARTICLE V**

**VESTING AND FORFEITURES**

5.1 In General

A Participant's interest in his or her Account will be nonforfeitable, subject to the exceptions in Section 5.2.

5.2 Exceptions

The following exceptions apply to the vesting rule:

(a) A RAC Participant shall become vested in his RAC Subaccount upon completing three years of service. For this purpose, years of service shall be calculated in the same manner as for purposes of determining vesting in Retirement Account Contributions under the NGSP (including the treatment of a break in service).

(b) Forfeitures on account of a lost payee. See Section 6.6.

(c) Forfeitures under an escheat law.

(d) Recapture of amounts improperly credited to a Participant's Account or improperly paid to or with respect to a Participant.

(e) Expenses charged to a Participant's Account.

(f) Investment losses.

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**ARTICLE VI**  
**DISTRIBUTIONS**

6.1 Distribution Rules for Non-RAC Amounts

The rules in this Section 6.1 apply to distribution of a Participant's Account other than the RAC Subaccount.

Notwithstanding the foregoing, Appendix B governs the distribution of amounts that were earned and vested (within the meaning of Code section 409A and regulations thereunder) under the Plan prior to 2005 (and earnings thereon) and are exempt from the requirements of Code section 409A. Thus, this Section 6.1 does not apply to these pre-2005 deferrals, but does apply to all other amounts deferred under the Plan.

(a) Separate Distribution Election. A Participant must make a separate distribution election for each year's contributions. A Participant generally makes a distribution election at the same time the Participant makes the deferral election, i.e., during the Open Enrollment Period.

(b) Distribution Upon Separation. A Participant may elect on a deferral form to have the portion of his Account related to amounts deferred under the deferral form and Company contributions for the same year (and earnings thereon) distributed in a lump sum or in quarterly or annual installments over a period of 1 to 15 years. Lump sum payments under the Plan will be made in the month following the Participant's Separation from Service. Installment payments shall commence in the March, June, September or December next following the month of Separation from Service. If a Participant does not make a distribution election and his Account balance exceeds \$50,000 and the Participant is age 55 or older at the time the Participant Separates from Service, the Participant will receive quarterly installments over a 10-year period. Otherwise, a Participant not making an election will receive a lump sum payment. Notwithstanding the foregoing, if the Participant's Account balance is \$50,000 or less or the Participant is under age 55 at the time the Participant Separates from Service, the full Account balance shall be distributed in a lump sum payment in the month following the Participant's Separation from Service.

Notwithstanding the timing rules in the foregoing paragraph, distributions may not be made to a Key Employee upon a Separation from Service before the date which is six months after the date of the Key Employee's Separation from Service (or, if earlier, the date of death of the Key Employee). Any payments that would otherwise be made during this period of delay shall be accumulated and paid six months after the date payments would have commenced absent the six month delay.

(c) Changes in Form of Distribution. A Participant may make up to two subsequent elections to change the form of a distribution for any year's deferrals and Company contributions. Such an election, however, shall be effective only if the following conditions are satisfied:

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- (1) The election may not take effect until at least twelve (12) months after the date on which the election is made; and
  - (2) The distribution will be made exactly five (5) years from the date the distribution would have otherwise been made.

#### 6.2 Distribution Rules for RAC Subaccount

The full balance in a RAC Subaccount shall be distributed in a lump sum upon a RAC Participant's Separation from Service. Notwithstanding the foregoing, distribution will not be made to a Key Employee upon a Separation from Service until the date which is six months after the date of the Key Employee's Separation from Service (or, if earlier, the date of death of the Key Employee).

#### 6.3 Effect of Taxation

If Plan benefits are includible in the income of a Participant under Code section 409A prior to actual receipt of the benefits, the Administrative Committee shall immediately distribute the benefits found to be so includible to the Participant.

#### 6.4 Permitted Delays

Notwithstanding the foregoing, any payment to a Participant under the Plan shall be delayed upon the Committee's reasonable anticipation of one or more of the following events:

- (a) The Company's deduction with respect to such payment would be eliminated by application of Code section 162(m); or
- (b) The making of the payment would violate Federal securities laws or other applicable law;
- (c) provided, that any payment delayed pursuant to this Section 6.4 shall be paid in accordance with Code section 409A.

#### 6.5 Payments Not Received At Death

In the event of the death of a Participant before receiving a payment, payment will be made to his or her estate if death occurs on or after the date of a check that has been issued by the Plan. Otherwise, payment of the amount will be made to the Participant's Beneficiary.

#### 6.6 Inability to Locate Participant

In the event that the Administrative Committee is unable to locate a Participant or Beneficiary within two years following the required payment date, the amount allocated to the Participant's Account shall be forfeited. If, after such forfeiture and prior to termination of the Plan, the Participant or Beneficiary later claims such benefit, such benefit shall be reinstated without interest or earnings for the forfeiture period.



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6.7 Committee Rules

All distributions are subject to the rules and procedures of the Administrative Committee. The Administrative Committee may also require the use of particular forms. The Administrative Committee may change its rules, procedures and forms from time to time and without prior notice to Participants.

**ARTICLE VII**  
**ADMINISTRATION**

7.1 Committees

(a) Effective April 27, 2006, the Administrative Committee shall be comprised of the individuals (in their corporate capacity) who are members of the Administrative Committee for Northrop Grumman Deferred Compensation Plan. If no such Administrative Committee exists, the members of the Administrative Committee for the Plan shall be individuals holding the following positions within the Company (as such titles may be modified from time to time), or their successors in office: the Corporate Vice President and Chief Human Resources and Administration Officer; the Corporate Vice President, Controller and Chief Accounting Officer; the Vice President, Taxation; the Vice President, Compensation, Benefits and HRIS; and the Corporate Director, Benefits Administration and Services. A member of the Administrative Committee may resign by delivering a written notice of resignation to the Corporate Vice President and Chief Human Resources and Administration Officer.

(b) Prior to April 27, 2006, the Administrative Committee shall be comprised of the individuals appointed by the Compensation Committee of the Board (the "Compensation Committee").

(c) An Investment Committee (referred to together with the Administrative Committee as, the "Committees"), comprised of one or more persons, shall be appointed by and serve at the pleasure of the Board (or its delegate). The number of members comprising the Investment Committee shall be determined by the Board, which may from time to time vary the number of members. A member of the Investment Committee may resign by delivering a written notice of resignation to the Board. The Board may remove any member by delivering a certified copy of its resolution of removal to such member. Vacancies in the membership of the Investment Committee shall be filled promptly by the Board.

7.2 Committee Action

Each Committee shall act at meetings by affirmative vote of a majority of the members of that Committee. Any determination of action of a Committee may be made or taken by a majority of a quorum present at any meeting thereof, or without a meeting, by resolution or written memorandum signed by a majority of the members of the Committee then in office. A member of a Committee shall not vote or act upon any matter which relates solely to himself or herself as a Participant. The Chairman or any other member or members of each Committee

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designated by the Chairman may execute any certificate or other written direction on behalf of the Committee of which he or she is a member.

The Compensation Committee shall appoint a Chairman from among the members of the Administrative Committee and a Secretary who may or may not be a member of the Administrative Committee. The Administrative Committee shall conduct its business according to the provisions of this Article and the rules contained in the current edition of Robert's Rules of Order or such other rules of order the Administrative Committee may deem appropriate. The Administrative Committee shall hold meetings from time to time in any convenient location.

7.3 Powers and Duties of the Administrative Committee

The Administrative Committee shall enforce the Plan in accordance with its terms, shall be charged with the general administration of the Plan, and shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

- (a) To construe and interpret the terms and provisions of this Plan and make all factual determinations;
- (b) To compute and certify to the amount and kind of benefits payable to Participants and their Beneficiaries;
- (c) To maintain all records that may be necessary for the administration of the Plan;
- (d) To provide for the disclosure of all information and the filing or provision of all reports and statements to Participants, Beneficiaries or governmental agencies as shall be required by law;
- (e) To make and publish such rules for the regulation of the Plan and procedures for the administration of the Plan as are not inconsistent with the terms hereof;
- (f) To appoint a Plan administrator or any other agent, and to delegate to them such powers and duties in connection with the administration of the Plan as the Administrative Committee may from time to time prescribe (including the power to subdelegate);
- (g) To exercise powers granted the Administrative Committee under other Sections of the Plan; and
- (h) To take all actions necessary for the administration of the Plan, including determining whether to hold or discontinue insurance policies purchased in connection with the Plan.

7.4 Powers and Duties of the Investment Committee

The Investment Committee shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

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- (a) To select types of investment and the actual investments against which earnings and losses will be measured;
  - (b) To oversee any rabbi trust; and
  - (c) To appoint agents, and to delegate to them such powers and duties in connection with its duties as the Investment Committee may from time to time prescribe (including the power to subdelegate).

#### 7.5 Construction and Interpretation

The Administrative Committee shall have full discretion to construe and interpret the terms and provisions of this Plan, to make factual determinations and to remedy possible inconsistencies and omissions. The Administrative Committee's interpretations, constructions and remedies shall be final and binding on all parties, including but not limited to the Affiliated Companies and any Participant or Beneficiary. The Administrative Committee shall administer such terms and provisions in a uniform and nondiscriminatory manner and in full accordance with any and all laws applicable to the Plan.

#### 7.6 Information

To enable the Committees to perform their functions, the Affiliated Companies adopting the Plan shall supply full and timely information to the Committees on all matters relating to the compensation of all Participants, their death or other events that cause termination of their participation in this Plan, and such other pertinent facts as the Committees may require.

#### 7.7 Committee Compensation, Expenses and Indemnity

(a) The members of the Committees shall serve without compensation for their services hereunder.

(b) The Committees are authorized to employ such accounting, consultants or legal counsel as they may deem advisable to assist in the performance of their duties hereunder.

(c) To the extent permitted by ERISA and applicable state law, the Company shall indemnify and hold harmless the Committees and each member thereof, the Board and any delegate of the Committees who is an employee of the Affiliated Companies against any and all expenses, liabilities and claims, including legal fees to defend against such liabilities and claims arising out of their discharge in good faith of responsibilities under or incident to the Plan, other than expenses and liabilities arising out of willful misconduct. This indemnity shall not preclude such further indemnities as may be available under insurance purchased by the Company or provided by the Company under any bylaw, agreement or otherwise, as such indemnities are permitted under ERISA and state law.

#### 7.8 Disputes

The Company's standardized "Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures" shall apply in handling claims and appeals under this Plan.

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**ARTICLE VIII**

**MISCELLANEOUS**

**8.1 Unsecured General Creditor**

Participants and their Beneficiaries, heirs, successors, and assigns shall have no legal or equitable rights, claims, or interest in any specific property or assets of the Affiliated Companies. No assets of the Affiliated Companies shall be held in any way as collateral security for the fulfilling of the obligations of the Affiliated Companies under this Plan. Any and all of the Affiliated Companies' assets shall be, and remain, the general unpledged, unrestricted assets of the Affiliated Companies. The obligation under the Plan of the Affiliated Companies adopting the Plan shall be merely that of an unfunded and unsecured promise of those Affiliated Companies to pay money in the future, and the rights of the Participants and Beneficiaries shall be no greater than those of unsecured general creditors. It is the intention of the Affiliated Companies that this Plan be unfunded for purposes of the Code and for purposes of Title I of ERISA.

**8.2 Restriction Against Assignment**

(a) The Company shall pay all amounts payable hereunder only to the person or persons designated by the Plan and not to any other person or corporation. No part of a Participant's Accounts shall be liable for the debts, contracts, or engagements of any Participant, his or her Beneficiary, or successors in interest, nor shall a Participant's Accounts be subject to execution by levy, attachment, or garnishment or by any other legal or equitable proceeding, nor shall any such person have any right to alienate, anticipate, sell, transfer, commute, pledge, encumber, or assign any benefits or payments hereunder in any manner whatsoever. If any Participant, Beneficiary or successor in interest is adjudicated bankrupt or purports to anticipate, alienate, sell, transfer, commute, assign, pledge, encumber or charge any distribution or payment from the Plan, voluntarily or involuntarily, the Administrative Committee, in its discretion, may cancel such distribution or payment (or any part thereof) to or for the benefit of such Participant, Beneficiary or successor in interest in such manner as the Administrative Committee shall direct.

(b) The actions considered exceptions to the vesting rule under Section 5.2 will not be treated as violations of this Section.

(c) Notwithstanding the foregoing, all or a portion of a Participant's Account balance may be paid to another person as specified in a domestic relations order that the Administrative Committee determines is qualified (a "Qualified Domestic Relations Order"). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

(1) issued pursuant to a State's domestic relations law;

(2) relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the Participant;

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(3) creates or recognizes the right of a spouse, former spouse, child or other dependent of the Participant to receive all or a portion of the Participant's benefits under the Plan; and

(4) meets such other requirements established by the Administrative Committee.

The Administrative Committee shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the Administrative Committee may consider the rules applicable to "domestic relations orders" under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

### 8.3 Restriction Against Double Payment

If a court orders an assignment of benefits despite Section 8.2, the affected Participant's benefits will be reduced accordingly. The Administrative Committee may use any reasonable actuarial assumptions to accomplish the offset under this Section.

### 8.4 Withholding

There shall be deducted from each payment made under the Plan or any other compensation payable to the Participant (or Beneficiary) all taxes, which are required to be withheld by the Affiliated Companies in respect to such payment or this Plan. The Affiliated Companies shall have the right to reduce any payment (or compensation) by the amount of cash sufficient to provide the amount of said taxes.

### 8.5 Amendment, Modification, Suspension or Termination

The Company may, in its sole discretion, terminate, suspend or amend this Plan at any time or from time to time, in whole or in part for any reason. Notwithstanding the foregoing, no amendment or termination of the Plan shall reduce the amount of a Participant's Account balance as of the date of such amendment or termination. Upon termination of the Plan, distribution of balances in Accounts shall be made to Participants and Beneficiaries in the manner and at the time described in Article VI, unless the Company determines in its sole discretion that all such amounts shall be distributed upon termination in accordance with the requirements under Code section 409A.

Notwithstanding the foregoing, no amendment of the Plan shall apply to amounts that were earned and vested (within the meaning of Code section 409A and regulations thereunder) under the Plan prior to 2005, unless the amendment specifically provides that it applies to such amounts. The purpose of this restriction is to prevent a Plan amendment from resulting in an inadvertent "material modification" to amounts that are "grandfathered" and exempt from the requirements of Code section 409A.

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8.6 Governing Law

To the extent not preempted by ERISA, this Plan shall be construed, governed and administered in accordance with the laws of Delaware.

8.7 Receipt and Release

Any payment to a payee in accordance with the provisions of the Plan shall, to the extent thereof, be in full satisfaction of all claims against the Plan, the Committees and the Affiliated Companies. The Administrative Committee may require such payee, as a condition precedent to such payment, to execute a receipt and release to such effect.

8.8 Payments on Behalf of Persons Under Incapacity

In the event that any amount becomes payable under the Plan to a person who, in the sole judgment of the Administrative Committee, is considered by reason of physical or mental condition to be unable to give a valid receipt therefore, the Administrative Committee may direct that such payment be made to any person found by the Committee, in its sole judgment, to have assumed the care of such person. Any payment made pursuant to such determination shall constitute a full release and discharge of the Administrative Committee and the Company.

8.9 Limitation of Rights and Employment Relationship

Neither the establishment of the Plan, any trust nor any modification thereof, nor the creating of any fund or account, nor the payment of any benefits shall be construed as giving to any Participant, or Beneficiary or other person any legal or equitable right against the Affiliated Companies or any trustee except as provided in the Plan and any trust agreement; and in no event shall the terms of employment of any Employee or Participant be modified or in any way be affected by the provisions of the Plan and any trust agreement.

8.10 Headings

Headings and subheadings in this Plan are inserted for convenience of reference only and are not to be considered in the construction of the provisions hereof.

8.11 Liabilities Transferred to HII

Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. ("HII") to its shareholders on March 31, 2011 (the "HII Distribution Date"). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Plan and the liabilities for these participants' benefits under the Plan were transferred to HII. On and after the HII Distribution Date, the Company and the Plan, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Plan.

\* \* \*

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IN WITNESS WHEREOF, this Amendment and Restatement is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and Chief Human Resources Officer

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**APPENDIX A – 2005 TRANSITION RELIEF**

The following provisions apply only during 2005, pursuant to transition relief granted in IRS Notice 2005-1:

A.1 Cash-Out

Participants Separating from Service during 2005 for any reason before age 55 will receive an immediate lump sum distribution of their Account balances. Other Participants Separating from Service in 2005 will receive payments in accordance with their prior elections.

A.2 Elections

During the Plan's open enrollment period in June 2005 Participants may fully or partially cancel 2005 deferral elections and receive in 2005 a refund of amounts previously deferred in 2005.

In addition, individuals working in Company facilities impacted by Hurricane Katrina may stop or reduce 2005 elective contributions to the Plan at any time during 2005. All payments under this Section A.2 will be made before the end of calendar year 2005.

A.3 Key Employees

Key Employees Separating from Service on or after July 1, 2005, with distributions subject to Code section 409A and scheduled for payment in 2006 within six months of Separation from Service, may choose I or II below, subject to III:

- I. Delay the distributions described above for six months from the date of Separation from Service. The delayed payments will be paid as a single sum with interest at the end of the six month period, with the remaining payments resuming as scheduled.
- II. Accelerate the distributions described above into a payment in 2005 without interest adjustments.
- III. Key Employees must elect I or II during 2005.



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**APPENDIX B – DISTRIBUTION RULES FOR PRE-2005 AMOUNTS**

Distribution of amounts earned and vested (within the meaning of Code section 409A and regulations thereunder) under the Plan prior to 2005 (and earnings thereon) are exempt from the requirements of Code section 409A and shall be made in accordance with the Plan terms as in effect on December 31, 2004 and as summarized in the following provisions.

**B.1 Distribution of Contributions**

**(a) Distributions Upon Early Termination**

(1) Voluntary Termination. If a Participant voluntarily terminates employment with the Affiliated Companies before age 55 or Disability, distribution of his or her Account will be made in a lump sum on the Participant's Payment Date.

(2) Involuntary Termination. If a Participant involuntarily terminates employment with the Affiliated Companies before age 55, distribution of his or her Account will generally be made in quarterly or annual installments over a fixed number of whole years not to exceed 15 years, commencing on the Participant's Payment Date, in accordance with the Participant's original election on his or her deferral election form. Payment will be made in a lump sum if the Participant had originally elected a lump sum, if the Account balance is \$50,000 or less, or if the Administrative Committee so specifies.

(b) Distribution After Retirement, Disability or Death. In the case of a Participant who separates from service with the Affiliated Companies on account of Retirement, Disability or death and has an Account balance of more than \$50,000, the Account shall be paid to the Participant (and after his or her death to his or her Beneficiary) in substantially equal quarterly installments over 10 years commencing on the Participant's Payment Date unless an optional form of benefit has been specified pursuant to Section B.1(b)(1).

(1) An optional form of benefit may be elected by the Participant, on the form provided by Administrative Committee, during his or her initial election period from among those listed below:

- (i) A lump sum distribution on the Participant's Payment Date.
- (ii) Quarterly installments over a period of at least 1 and no more than 15 years beginning on the Participant's Payment Date.
- (iii) Annual installments over a period of at least 2 and no more than 15 years beginning on the Participant's Payment Date.

(2) A Participant from time to time may modify the form of benefit that he or she has previously elected. Upon his or her separation from service, the most recently elected form of distribution submitted at least 12 months prior to separation will govern. If no such election exists, distributions will be paid under the 10-year installment method.

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(3) In the case of a Participant who terminates employment with the Affiliated Companies on account of Retirement, Disability or death with an Account balance of \$50,000 or less, the Account shall be paid to the Participant in a lump sum distribution on the Participant's Payment Date.

(4) In general, upon the Participant's death, payment of any remaining Account balance will be made to the Beneficiary in a lump sum on the Payment Date. But the Beneficiary will receive any remaining installments (starting on the Payment Date) if the Participant was receiving installments, or if the Participant died on or after age 55 with an Account balance over \$50,000 and with an effective installment payout election in place. In such cases, the Beneficiary may still elect a lump sum payment of the remaining Account balance, but only with the Administrative Committee's consent.

(5) In the event that this Plan is terminated, the amounts allocated to a Participant's Account shall be distributed to the Participant or, in the event of his or her death, to his or her Beneficiary in a lump sum.

**APPENDIX C – MERGED PLANS**

C.1 Plan Mergers

(a) Merged Plans. As of their respective effective dates, the plans listed in (c)(the “Merged Plans”) are merged into this Plan. All amounts from those plans that were merged into this Plan are held in their corresponding Accounts.

(b) Accounts. Effective as of the dates below, Accounts are established for individuals who, before the merger, had account balances under the merged plans. These individuals will not accrue benefits under this Plan unless they become Participants by virtue of being hired into a covered position with an Affiliated Company, but they will be considered Participants for purposes of the merged accounts. The balance credited to the Participant’s merged plan account will, effective as of the date provided in the table below, be invested in accordance with the terms of this Plan. Except as provided in section C.2 below, amounts merged into this Plan from the merged plans are governed by the terms of this Plan.

(c) Table.

<u>Name of Merged Plans</u>	<u>Merger Effective Dates</u>	<u>Merged Account Names</u>
Northrop Grumman Benefits Equalization Plan	December 10, 2004	NG BEP Account
Northrop Grumman Space & Mission Systems Corp. Deferred Compensation Plan	December 10, 2004	S & MS Deferred Compensation Account
BDM International, Inc. 1997 Executive Deferred Compensation Plan (“BDM Plan”)	April 29, 2005	BDM Account

C.2 Merged Plans – General Rule

(a) NG BEP Account and S & MS Deferred Compensation Account. Distributions from Participants’ NG BEP and S & MS Deferred Compensation Accounts are made under the provisions of Appendix B, except as provided in this Section.

(1) Amounts in the Participant’s NG BEP Account and the S & MS Deferred Compensation Account shall be paid out in accordance with elections made under the Merged Plans.

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(2) The Participant's "Payment Date" for amounts in the NG BEP Account and the S & MS Deferred Compensation Account shall be deemed to be the end of January following the Participant's termination of employment.

(3) The reference to \$50,000 in the provisions of Appendix B shall be deemed to be \$5,000 with respect to amounts in the NG BEP Account and the S & MS Deferred Compensation Account.

(4) The Administrative Committee shall assume the rights and responsibilities of the Directors/Committee with respect to determining whether a Participant's NG BEP Account may be paid out in a form other than the automatic form of payment.

(5) The Administrative Committee shall assume the rights and responsibilities of the Committee or Special Committee with respect to determining whether a Participant's S & MS Deferred Compensation Account may be paid out in a form other than the automatic form of payment.

(6) For purposes of determining the time of payment of a Participant's NG BEP Account, a Participant's employment will not be deemed to have terminated following the Participant's layoff until the earlier of the end of the twelve-month period following layoff (without a return to employment with the Affiliated Companies) or the date on which the Participant retires under any pension plan maintained by the Affiliated Companies.

(7) A Participant's S & MS Deferred Compensation Account shall be paid to the Participant no later than the January 5 next preceding the Participant's 80<sup>th</sup> birthday.

(8) In no event will payments of amounts in the Participant's NG BEP Account and the S & MS Deferred Compensation Account be accelerated or deferred beyond the payment schedule provided under the Merged Plans. However, any election to change the time or form of payment for such an amount may be made based on the terms of the relevant Merged Plan as in effect on October 3, 2004.

(b) BDM Account. Distributions of a Participant's vested BDM Account balance shall be made in accordance with this Section C.2(b), and Article VI shall not apply to such distributions. A Participant shall be vested in his BDM Account balance in accordance with the vesting provisions of the BDM Plan.

(1) Timing of Payment: A Participant's vested BDM Account balance shall be distributed in accordance with elections made under the BDM Plan. For those Participants who have not commenced distributions as of April 29, 2005, payments from the BDM Account will commence at the time designated on his or her BDM enrollment and election form, unless extended prior to such date. However, if such a Participant did not elect a fixed date (or elect the earlier of a fixed date or termination of employment), his or her vested BDM Account balance will be paid as soon as administratively practicable following termination of employment in the form designated under Section C.2(b)(2) below.

(2) Form of Payment: A Participant's vested BDM Account balance shall be paid in cash. The vested BDM Account balance will be paid in (i) a lump sum, (ii) five

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(5) or ten (10) substantially equal annual installments (adjusted for gains and losses), or (iii) a combination thereof, as selected by the Participant (or Beneficiary) prior to the date on which amounts are first payable to the Participant (or Beneficiary) under Section C.2(b)(1) above. If the Participant fails to designate properly the manner of payment, such payment will be made in a lump sum.

(3) Death Benefits: If a Participant dies before commencement of payment of his BDM Account balance, the entire Account balance will be paid at the times provided in Section C.2(b)(2) above to his or her Beneficiary. If a Participant dies after commencement but before he or she has received all payments from his vested BDM Account balance, the remaining installments shall be paid annually to the Beneficiary. For purposes of this Section C.2(b), a Participant's Beneficiary, unless subsequently changed, will be the designated beneficiary(ies) under the BDM Plan or if none, the Participant's spouse, if then living, but otherwise the Participant's then living descendants, if any, per stirpes, but, if none, the Participant's estate.

(4) Lost Participant: In the event that the Administrative Committee is unable to locate a Participant or Beneficiary within three years following the payment date under Section C.2(b)(1) above, the amount allocated to the Participant's BDM Account shall be forfeited. If, after such forfeiture and prior to termination of the Plan, the Participant or Beneficiary later claims such benefit, such benefit shall be reinstated without interest or earnings for the forfeiture period. In lieu of such a forfeiture, the Administrative Committee has the discretion to direct distribution of the vested BDM Account balance to any one or more or all of the Participant's next of kin, and in the proportions as the Administrative Committee determines.

(5) Committee Rules: All distributions are subject to the rules and procedures of the Administrative Committee. The Administrative Committee may also require the use of particular forms. The Administrative Committee may change its rules, procedures and forms from time to time and without prior notice to Participants.

(6) Payment Schedule: In no event will payments of amounts in the Participant's BDM Account be accelerated or deferred beyond the payment schedule provided under the BDM Plan.

(7) Application to Trustee: BDM International, Inc. set aside amounts in a grantor trust to assist it in meeting its obligations under the BDM Plan. Notwithstanding Section C.2(b)(5) above and the claims procedures provided in Section 7.8, a Participant may make application for payment of benefits under this Section C.2(b) directly to the trustee of such trust.

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**APPENDIX D – COMMITTEES AND APPOINTMENTS**

Notwithstanding anything to the contrary in this Plan, effective October 25, 2011, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Article VII of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

NORTHROP GRUMMAN  
OFFICERS RETIREMENT ACCOUNT CONTRIBUTION PLAN  
(Amended and Restated Effective as of January 1, 2012)

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## INTRODUCTION

The Northrop Grumman Officers Retirement Account Contribution Plan (the "Plan") was adopted effective as of October 1, 2009. The Plan is hereby amended and restated effective as of January 1, 2012, except as otherwise provided. This restatement amends the January 1, 2011 restatement of the Plan.

This Plan is intended (1) to comply with section 409A of the Internal Revenue Code, as amended (the "Code") and official guidance issued thereunder, and (2) to be "a plan which is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of sections 201(2), 301(a)(3) and 401(a)(1) of the Employee Retirement Income Security Act of 1974. Notwithstanding any other provision of this Plan, this Plan shall be interpreted, operated and administered in a manner consistent with these intentions.

## **ARTICLE I**

### DEFINITIONS

#### 1.1 Definitions

Whenever the following words and phrases are used in this Plan, with the first letter capitalized, they shall have the meanings specified below.

"Account" shall mean the recordkeeping account set up for each Participant to keep track of amounts to his or her credit.

"Administrative Committee" means the committee in charge of Plan administration, as described in Article VI.

"Affiliated Companies" shall mean the Company and any entity affiliated with the Company under Code sections 414(b) or (c).

"Beneficiary" or "Beneficiaries" shall mean the person or persons, including a trustee, personal representative or other fiduciary, last designated in writing by a Participant in accordance with procedures established by the Administrative Committee to receive the benefits specified hereunder in the event of the Participant's death.

(a) No Beneficiary designation shall become effective until it is filed with the Administrative Committee.

(b) Any designation shall be revocable at any time through a written instrument filed by the Participant with the Administrative Committee with or without the consent of the previous Beneficiary.

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No designation of a Beneficiary other than the Participant's spouse shall be valid unless consented to in writing by such spouse. If there is no such designation or if there is no surviving designated Beneficiary, then the Participant's surviving spouse shall be the Beneficiary. If there is no surviving spouse to receive any benefits payable in accordance with the preceding sentence, the duly appointed and currently acting personal representative of the Participant's estate (which shall include either the Participant's probate estate or living trust) shall be the Beneficiary. In any case where there is no such personal representative of the Participant's estate duly appointed and acting in that capacity within 90 days after the Participant's death (or such extended period as the Administrative Committee determines is reasonably necessary to allow such personal representative to be appointed, but not to exceed 180 days after the Participant's death), then Beneficiary shall mean the person or persons who can verify by affidavit or court order to the satisfaction of the Administrative Committee that they are legally entitled to receive the benefits specified hereunder. Any payment made pursuant to such determination shall constitute a full release and discharge of the Plan, the Administrative Committee and the Company. A Participant will automatically revoke a designation of a spouse as primary beneficiary upon the dissolution of their marriage.

(c) In the event any amount is payable under the Plan to a minor, payment shall not be made to the minor, but instead be paid (1) to that person's living parent(s) to act as custodian, (2) if that person's parents are then divorced, and one parent is the sole custodial parent, to such custodial parent, or (3) if no parent of that person is then living, to a custodian selected by the Administrative Committee to hold the funds for the minor under the Uniform Transfers or Gifts to Minors Act in effect in the jurisdiction in which the minor resides. If no parent is living and the Administrative Committee decides not to select another custodian to hold the funds for the minor, then payment shall be made to the duly appointed and currently acting guardian of the estate for the minor or, if no guardian of the estate for the minor is duly appointed and currently acting within 60 days after the date the amount becomes payable, payment shall be deposited with the court having jurisdiction over the estate of the minor. Any payment made pursuant to such determination shall constitute a full release and discharge of the Plan, the Administrative Committee and the Company.

(d) Payment by the Affiliated Companies pursuant to any unrevoked Beneficiary designation, or to the Participant's estate if no such designation exists, of all benefits owed hereunder shall terminate any and all liability of the Affiliated Companies.

"Board" shall mean the Board of Directors of the Company.

"Code" shall mean the Internal Revenue Code of 1986, as amended.

"Committees" shall mean the Committees appointed as provided in Article VI.

"Company" shall mean Northrop Grumman Corporation and any successor.

"Company Contributions" shall mean credits to a Participant's Account, as described in Section 3.2.

"Compensation" shall be "compensation" as defined by Section 5.01 of the NGSP.

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“Compensation Committee” shall mean the Compensation Committee of the Company’s Board of Directors.

“Eligible Employee” shall mean any Employee who meets the following conditions:

(a) Prior to January 1, 2015:

(1) he or she is an elected or appointed officer of an Affiliated Company other than Vinnell Corporation, Component Technologies or Premier America Credit Union;

(2) he or she is not eligible to actively accrue benefits under Appendix F (“CPC SERP”), Appendix G (“OSERP”), or Appendix I (“OSERP II”) of the Northrop Grumman Supplemental Plan 2; and

(3) he or she is not otherwise designated as being ineligible to participate in the Plan.

(b) On or after January 1, 2015:

(1) he or she is an elected or appointed officer of an Affiliated Company other than Vinnell Corporation, Component Technologies or Premier America Credit Union; and

(2) he or she is not otherwise designated as being ineligible to participate in the Plan.

“Employee” shall mean any common law employee of the Affiliated Companies who is classified as an employee by the Affiliated Companies.

“ERISA” shall mean the Employee Retirement Income Security Act of 1974, as it may be amended from time to time.

“Investment Committee” means the committee in charge of investment aspects of the Plan, as described in Article VI.

“Key Employee” means an employee treated as a “specified employee” under Code section 409A(a)(2)(B)(i) of the Company or the Affiliated Companies (i.e., a key employee (as defined in Code section 416(i) without regard to paragraph (5) thereof) if the Company’s or an Affiliated Company’s stock is publicly traded on an established securities market or otherwise. The Company shall determine in accordance with a uniform Company policy which Participants are Key Employees as of each December 31 in accordance with IRS regulations or other guidance under Code section 409A, provided that in determining the compensation of individuals for this purpose, the definition of compensation in Treas. Reg. § 1.415(c)-2(d)(3) shall be used. Such determination shall be effective for the twelve (12) month period commencing on April 1 of the following year.

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“NGSP” means the Northrop Grumman Savings Plan.

“Participant” shall mean any Eligible Employee who participates in this Plan in accordance with Article II.

“Plan” shall be the Northrop Grumman Officers Retirement Account Contribution Plan.

“Separation from Service” means a “separation from service” within the meaning of Code section 409A.

## **ARTICLE II**

### **PARTICIPATION**

#### **2.1 In General**

(a) An Employee shall automatically become a Participant and eligible for Company Contributions as of the later of October 1, 2009 or the date the Employee becomes an Eligible Employee.

(b) An individual will cease to be a Participant when he or she no longer has a positive balance in his or her Account.

#### **2.2 Disputes as to Employment Status**

(a) Because there may be disputes about an individual’s proper status as an Employee or non-Employee, this Section describes how such disputes are to be handled with respect to Plan participation.

(b) The Affiliated Companies will make the initial determination of an individual’s employment status.

(1) If an individual is not treated by the Affiliated Companies as a common law employee, then the Plan will not consider the individual to be an “Eligible Employee” and he or she will not be entitled to participate in the Plan.

(2) This will be so even if the individual is told he or she is entitled to participate in the Plan and given a summary of the plan or other actions are taken indicating that he or she may participate.

(c) Disputes may arise as to an individual’s employment status. As part of the resolution of the dispute, an individual’s status may be changed by the Affiliated Companies from non-Employee to Employee. Such Employees are not Eligible Employees and will not be entitled to participate in the Plan.

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**ARTICLE III**  
**CREDITS TO ACCOUNTS**

3.1 Accounts

The Administrative Committee shall establish and maintain a recordkeeping Account for each Participant under the Plan.

3.2 Company Contribution Credits

If a Participant qualifies as an Eligible Employee during a payroll period, the Participant's Account shall be credited with a Company Contribution as soon as practicable after the end of the payroll period. The Company Contribution for a payroll period shall equal 4% of the Participant's Compensation for the payroll period.

3.3 Earnings Credits

A Participant's Account will be periodically credited with earnings, gains and losses as if the Account was invested in the same investment options as the Participant's RAC Subaccount in the Northrop Grumman Savings Excess Plan. If a Participant does not have such a RAC Subaccount, his Account will be credited with earnings, gains and losses as if the Account was invested in the qualified default investment alternative ("QDIA") that applies to the Participant under the NGSP.

3.4 Valuation of Accounts

(a) The valuation of Participants' Accounts will reflect earnings, losses, expenses and distributions, and will be made in accordance with the rules and procedures of the Administrative Committee.

(b) The Administrative Committee may set regular valuation dates and times and also use special valuation dates and times and procedures from time to time under unusual circumstances and to protect the financial integrity of the Plan.

(c) The Administrative Committee may use averaging methods to determine values and accrue estimated expenses.

(d) The Administrative Committee may change its valuation rules and procedures from time to time and without prior notice to Participants.

3.5 Use of a Trust

The Company may set up a trust to hold any assets or insurance policies that it may use in meeting its obligations under the Plan. Any trust set up will be a rabbi trust and any assets placed in the trust shall continue for all purposes to be part of the general assets of the Company and shall be available to its general creditors in the event of the Company's bankruptcy or insolvency.

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3.6 Investment Return Not Guaranteed

Investment performance under the Plan is not guaranteed at any level. Participants may lose all or a portion of the Company Contributions credited to their Accounts due to poor investment performance.

**ARTICLE IV**

**VESTING AND FORFEITURES**

4.1 In General

A Participant shall become vested in his Account balance upon completing three years of service. For this purpose, years of service shall be calculated in the same manner as for purposes of determining vesting in Retirement Account Contributions under the NGSP (including the treatment of a break in service). Notwithstanding the foregoing, any elected or appointed officer of an Affiliated Company as of December 31, 2011 shall be 100% vested in his or her Account balance upon entry to the Plan if the officer becomes a Participant in the Plan on January 1, 2015.

4.2 Exceptions

The following exceptions apply to the vesting rule:

- (a) Forfeitures on account of a lost payee. See Section 5.5.
- (b) Forfeitures under an escheat law.
- (c) Recapture of amounts improperly credited to a Participant's Account or improperly paid to or with respect to a Participant.
- (d) Expenses charged to a Participant's Account.
- (e) Investment losses.

**ARTICLE V**

**DISTRIBUTIONS**

5.1 Normal Distribution Rules

The vested balance in a Participant's Account shall be distributed in a lump sum upon a Participant's Separation from Service. Notwithstanding the foregoing, distribution will not be made to a Key Employee upon a Separation from Service until the date which is six months after the date of the Key Employee's Separation from Service (or, if earlier, the date of death of the Key Employee).

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5.2 Effect of Taxation

If Plan benefits are includible in the income of a Participant under Code section 409A prior to actual receipt of the benefits, the Administrative Committee shall immediately distribute the benefits found to be so includible to the Participant.

5.3 Permitted Delays

Notwithstanding the foregoing, any payment to a Participant under the Plan shall be delayed upon the Administrative Committee's reasonable anticipation of one or more of the following events:

- (a) The Company's deduction with respect to such payment would be eliminated by application of Code section 162(m); or
- (b) The making of the payment would violate Federal securities laws or other applicable law;
- (c) provided, that any payment delayed pursuant to this Section 5.3 shall be paid in accordance with Code section 409A.

5.4 Payments Not Received At Death

In the event of the death of a Participant before receiving a payment, payment will be made to his or her estate if death occurs on or after the date of a check that has been issued by the Company. Otherwise, payment of the amount will be made to the Participant's Beneficiary.

5.5 Inability to Locate Participant

In the event that the Administrative Committee is unable to locate a Participant or Beneficiary within two years following the required payment date, the amount allocated to the Participant's Account shall be forfeited.



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5.6 Committee Rules

All distributions are subject to the rules and procedures of the Administrative Committee. The Administrative Committee may also require the use of particular forms. The Administrative Committee may change its rules, procedures and forms from time to time and without prior notice to Participants.

**ARTICLE VI**

**ADMINISTRATION**

6.1 Committees

(a) The Administrative Committee shall be appointed by the Company.

(b) An Investment Committee (referred to together with the Administrative Committee as, the “Committees”), comprised of one or more persons, shall be appointed by and serve at the pleasure of the Board (or its delegate). The number of members comprising the Investment Committee shall be determined by the Board, which may from time to time vary the number of members. A member of the Investment Committee may resign by delivering a written notice of resignation to the Board. The Board may remove any member by delivering a certified copy of its resolution of removal to such member. Vacancies in the membership of the Investment Committee shall be filled promptly by the Board.

6.2 Committee Action

Each Committee shall act at meetings by affirmative vote of a majority of the members of that Committee. Any determination of action of a Committee may be made or taken by a majority of a quorum present at any meeting thereof, or without a meeting, by resolution or written memorandum signed by a majority of the members of the Committee then in office. A member of a Committee shall not vote or act upon any matter which relates solely to himself or herself as a Participant. The Chairman or any other member or members of each Committee designated by the Chairman may execute any certificate or other written direction on behalf of the Committee of which he or she is a member.

The Company shall appoint a Chairman from among the members of the Administrative Committee and a Secretary who may or may not be a member of the Administrative Committee. The Administrative Committee shall conduct its business according to the provisions of this Article and the rules contained in the current edition of Robert’s Rules of Order or such other rules of order the Administrative Committee may deem appropriate. The Administrative Committee shall hold meetings from time to time in any convenient location.

6.3 Powers and Duties of the Administrative Committee

The Administrative Committee shall enforce the Plan in accordance with its terms, shall be charged with the general administration of the Plan, and shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

- 
- (a) To construe and interpret the terms and provisions of this Plan and make all factual determinations;
  - (b) To compute and certify to the amount and kind of benefits payable to Participants and their Beneficiaries;
  - (c) To maintain all records that may be necessary for the administration of the Plan;
  - (d) To provide for the disclosure of all information and the filing or provision of all reports and statements to Participants, Beneficiaries or governmental agencies as shall be required by law;
  - (e) To make and publish such rules for the regulation of the Plan and procedures for the administration of the Plan as are not inconsistent with the terms hereof;
  - (f) To appoint a Plan administrator or any other agent, and to delegate to them such powers and duties in connection with the administration of the Plan as the Administrative Committee may from time to time prescribe (including the power to subdelegate);
  - (g) To exercise powers granted the Administrative Committee under other Sections of the Plan; and
  - (h) To take all actions necessary for the administration of the Plan, including determining whether to hold or discontinue insurance policies purchased in connection with the Plan.

#### 6.4 Powers and Duties of the Investment Committee

The Investment Committee shall have all powers necessary to accomplish its purposes, including, but not by way of limitation, the following:

- (a) To oversee any rabbi trust; and
- (b) To appoint agents, and to delegate to them such powers and duties in connection with its duties as the Investment Committee may from time to time prescribe (including the power to subdelegate).

#### 6.5 Construction and Interpretation

The Administrative Committee shall have full discretion to construe and interpret the terms and provisions of this Plan, to make factual determinations and to remedy possible inconsistencies and omissions. The Administrative Committee's interpretations, constructions and remedies shall be final and binding on all parties, including but not limited to the Affiliated Companies and any Participant or Beneficiary. The Administrative Committee shall administer such terms and provisions in a uniform and nondiscriminatory manner and in full accordance with any and all laws applicable to the Plan.

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6.6 Information

To enable the Committees to perform their functions, the Affiliated Companies adopting the Plan shall supply full and timely information to the Committees on all matters relating to the compensation of all Participants, their death or other events that cause termination of their participation in this Plan, and such other pertinent facts as the Committees may require.

6.7 Committee Compensation, Expenses and Indemnity

(a) The members of the Committees shall serve without compensation for their services hereunder.

(b) The Committees are authorized to employ such accounting, consultants or legal counsel as they may deem advisable to assist in the performance of their duties hereunder.

(c) To the extent permitted by ERISA and applicable state law, the Company shall indemnify and hold harmless the Committees and each member thereof, the Board and any delegate of the Committees who is an employee of the Affiliated Companies against any and all expenses, liabilities and claims, including legal fees to defend against such liabilities and claims arising out of their discharge in good faith of responsibilities under or incident to the Plan, other than expenses and liabilities arising out of willful misconduct. This indemnity shall not preclude such further indemnities as may be available under insurance purchased by the Company or provided by the Company under any bylaw, agreement or otherwise, as such indemnities are permitted under ERISA and state law.

6.8 Claims

The Company's standardized "Northrop Grumman Nonqualified Retirement Plans Claims and Appeals Procedures" (the "Claims Procedures") shall apply in handling claims and appeals under this Plan.

**ARTICLE VII**

**MISCELLANEOUS**

7.1 Unsecured General Creditor

Participants and their Beneficiaries, heirs, successors, and assigns shall have no legal or equitable rights, claims, or interest in any specific property or assets of the Affiliated Companies. No assets of the Affiliated Companies shall be held in any way as collateral security for the fulfilling of the obligations of the Affiliated Companies under this Plan. Any and all of the Affiliated Companies' assets shall be, and remain, the general unpledged, unrestricted assets of the Affiliated Companies. The obligation under the Plan of the Affiliated Companies adopting the Plan shall be merely that of an unfunded and unsecured promise of those Affiliated Companies to pay money in the future, and the rights of the Participants and Beneficiaries shall be no greater than those of unsecured general creditors. It is the intention of the Affiliated

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Companies that this Plan be unfunded for purposes of the Code and for purposes of Title I of ERISA.

7.2 Restriction Against Assignment

(a) The Company shall pay all amounts payable hereunder only to the person or persons designated by the Plan and not to any other person or corporation. No part of a Participant's Accounts shall be liable for the debts, contracts, or engagements of any Participant, his or her Beneficiary, or successors in interest, nor shall a Participant's Accounts be subject to execution by levy, attachment, or garnishment or by any other legal or equitable proceeding, nor shall any such person have any right to alienate, anticipate, sell, transfer, commute, pledge, encumber, or assign any benefits or payments hereunder in any manner whatsoever. If any Participant, Beneficiary or successor in interest is adjudicated bankrupt or purports to anticipate, alienate, sell, transfer, commute, assign, pledge, encumber or charge any distribution or payment from the Plan, voluntarily or involuntarily, the Administrative Committee, in its discretion, may cancel such distribution or payment (or any part thereof) to or for the benefit of such Participant, Beneficiary or successor in interest in such manner as the Administrative Committee shall direct.

(b) The actions considered exceptions to the vesting rule under Section 4.2 will not be treated as violations of this Section.

(c) Notwithstanding the foregoing, all or a portion of a Participant's vested Account balance may be paid to another person as specified in a domestic relations order that the Administrative Committee determines is qualified (a "Qualified Domestic Relations Order"). For this purpose, a Qualified Domestic Relations Order means a judgment, decree, or order (including the approval of a settlement agreement) which is:

(1) issued pursuant to a State's domestic relations law;

(2) relates to the provision of child support, alimony payments or marital property rights to a spouse, former spouse, child or other dependent of the Participant;

(3) creates or recognizes the right of a spouse, former spouse, child or other dependent of the Participant to receive all or a portion of the Participant's benefits under the Plan; and

(4) meets such other requirements established by the Administrative Committee.

The Administrative Committee shall determine whether any document received by it is a Qualified Domestic Relations Order. In making this determination, the Administrative Committee may consider the rules applicable to "domestic relations orders" under Code section 414(p) and ERISA section 206(d), and such other rules and procedures as it deems relevant.

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7.3 Restriction Against Double Payment

If a court orders an assignment of benefits despite Section 7.2, the affected Participant's benefits will be reduced accordingly. The Administrative Committee may use any reasonable actuarial assumptions to accomplish the offset under this Section.

7.4 Withholding

There shall be deducted from each payment made under the Plan or any other compensation payable to the Participant (or Beneficiary) all taxes, which are required to be withheld by the Affiliated Companies in respect to such payment or this Plan. The Affiliated Companies shall have the right to reduce any payment (or compensation) by the amount of cash sufficient to provide the amount of said taxes.

7.5 Amendment, Modification, Suspension or Termination

The Company may, in its sole discretion, terminate, suspend or amend this Plan at any time or from time to time, in whole or in part for any reason. Notwithstanding the foregoing, no amendment or termination of the Plan shall reduce the amount of a Participant's Account balance as of the date of such amendment or termination. Upon termination of the Plan, distribution of balances in Accounts shall be made to Participants and Beneficiaries in the manner and at the time described in Article V, unless the Company determines in its sole discretion that all such amounts shall be distributed upon termination in accordance with the requirements under Code section 409A.

7.6 Governing Law

To the extent not preempted by ERISA, this Plan shall be construed, governed and administered in accordance with the laws of Delaware.

7.7 Receipt and Release

Any payment to a payee in accordance with the provisions of the Plan shall, to the extent thereof, be in full satisfaction of all claims against the Plan, the Committees and the Affiliated Companies. The Administrative Committee may require such payee, as a condition precedent to such payment, to execute a receipt and release to such effect.

7.8 Payments on Behalf of Persons Under Incapacity

In the event that any amount becomes payable under the Plan to a person who, in the sole judgment of the Administrative Committee, is considered by reason of physical or mental condition to be unable to give a valid receipt therefore, the Administrative Committee may direct that such payment be made to any person found by the Committee, in its sole judgment, to have assumed the care of such person. Any payment made pursuant to such determination shall constitute a full release and discharge of the Administrative Committee and the Company.

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7.9 Limitation of Rights and Employment Relationship

Neither the establishment of the Plan, any trust nor any modification thereof, nor the creating of any fund or account, nor the payment of any benefits shall be construed as giving to any Participant, or Beneficiary or other person any legal or equitable right against the Affiliated Companies or any trustee except as provided in the Plan and any trust agreement; and in no event shall the terms of employment of any Employee or Participant be modified or in any way be affected by the provisions of the Plan and any trust agreement.

7.10 Headings

Headings and subheadings in this Plan are inserted for convenience of reference only and are not to be considered in the construction of the provisions hereof.

7.11 Liabilities Transferred to HII

Northrop Grumman Corporation distributed its interest in Huntington Ingalls Industries, Inc. (“HII”) to its shareholders on March 31, 2011 (the “HII Distribution Date”). Pursuant to an agreement between Northrop Grumman Corporation and HII, on the HII Distribution Date certain employees and former employees of HII ceased to participate in the Plan and the liabilities for these participants’ benefits under the Plan were transferred to HII. On and after the HII Distribution Date, the Company and the Plan, and any successors thereto, shall have no further obligation or liability to any such participant with respect to any benefit, amount, or right due under the Plan.

**ARTICLE VIII**

**FORFEITURE OF BENEFITS**

8.1 In General

Notwithstanding any other provision of this Plan, this Article VIII applies to the portion of a Participant’s Account balance accrued after 2011.

8.2 Determination of a Forfeiture Event

The Compensation Committee or its delegate will, in its sole discretion, determine whether a Forfeiture Event (as defined in Section 8.4) has occurred; provided that no Forfeiture Event shall be incurred by a Participant who has a termination of employment due to mandatory retirement pursuant to Company policy. Such a determination may be made by the Compensation Committee or its delegate for up to one year following the date that the Compensation Committee has actual knowledge of the circumstances that could constitute a Forfeiture Event.

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### 8.3 No Forfeiture Event for Certain Terminations after Change in Control

Notwithstanding the foregoing, no Forfeiture Event shall be incurred by a Participant who, within the two year period following a Change in Control (as defined in the Northrop Grumman 2011 Long-Term Incentive Stock Plan or successor plan in effect at the time the relevant event occurs (“LTISP”)), is involuntarily terminated for reasons other than Cause or voluntarily terminates for Good Reason. The terms “Cause” and “Good Reason” shall be defined in accordance with the LTISP and its associated grant certificates. This Article VIII may not be amended during the two year period commencing on the date of such a Change in Control.

### 8.4 Forfeiture Event Defined

A “Forfeiture Event” means that, while employed by any of the Affiliated Companies or at any time in the two year period immediately following the Participant’s last day of employment by one of the Affiliated Companies, the Participant, either directly or indirectly through any other person, is employed by, renders services (as a director, consultant or otherwise) to, has any ownership interest in, or otherwise participates in the financing, operation, management or control of, any business that is then in competition with the business of any of the Affiliated Companies. A Participant will not, however, be considered to have incurred a Forfeiture Event solely by reason of owning up to (and not more than) two percent (2%) of any class of capital stock of a corporation that is registered under the Securities Exchange Act of 1934.

### 8.5 Amount of Forfeiture

(a) If the Compensation Committee or its delegate determines that a Forfeiture Event has occurred, the relevant Participant may forfeit up to 100% of his or her Account balance accrued after 2011. The amount forfeited, if any, will be determined by the Compensation Committee or its delegate in its sole discretion, and may consist of all or a portion of the Account balance accrued after 2011 and not yet paid.

(b) Any forfeiture pursuant to this Article VIII will also apply with respect to survivor benefits or benefits assigned under a Qualified Domestic Relations Order.

### 8.6 Notice and Claims Procedure

(a) The Company will provide timely notice to any Participant who incurs a forfeiture pursuant to this Article VIII. Any delay by the Company in providing such notice will not otherwise affect the amount or timing of any forfeiture determined by the Compensation Committee or its delegate.

(b) The procedures set forth in the Claims Procedures will apply to any claims and appeals arising out of or related to any forfeiture under this Article VIII, except as provided below:

- (1) The Compensation Committee, or its delegate, will serve in place of the designated decision-makers on any such claims and appeals.

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(2) After a claimant has exhausted his remedies under the Claims Procedures, including the appeal stage, the claimant forgoes any right to file a civil action under ERISA section 502(a), but instead may present any claims arising out of or related to any forfeiture under this Article VIII to final and binding arbitration in the manner described below:

(A) A claimant must file a demand for arbitration no later than one year following a final decision on the appeal under the Claims Procedures. After such period, no claim for arbitration may be filed, and the decision becomes final. A claimant must deliver a demand for arbitration to the Company's General Counsel.

(B) Any claims presented shall be settled by arbitration consistent with the Federal Arbitration Act, and consistent with the then-current Arbitration Rules and Procedures for Employment Disputes, or equivalent, established by JAMS, a provider of private dispute resolution services.

(C) The parties will confer to identify a mutually acceptable arbitrator. If the parties are unable to agree on an arbitrator, the parties will request a list of proposed arbitrators from JAMS and:

(i) If there is an arbitrator on the list acceptable to both parties, that person will be selected. If there is more than one arbitrator on the list acceptable to both parties, each party will rank each arbitrator in order of preference, and the arbitrator with the highest combined ranking will be selected.

(ii) If there is no arbitrator acceptable to both parties on the list, the parties will alternately strike names from the list until only one name remains, who will be selected.

(D) The fees and expenses of the arbitrator will be borne equally by the claimant and the Company. Each side will be entitled to use a representative, including an attorney, at the arbitration. Each side will bear its own deposition, witness, expert, attorneys' fees, and other expenses to the same extent as if the matter were being heard in court. If, however, any party prevails on a claim, which (if brought in court) affords the prevailing party attorneys' fees and/or costs, then the arbitrator may award reasonable fees and/or costs to the prevailing party to the same extent as would apply in court. The arbitrator will resolve any dispute as to who is the prevailing party and as to the reasonableness of any fee or cost.

(E) The arbitrator will take into account all comments, documents, records, other information, arguments, and theories submitted by the claimant relating to the claim, or considered by the Compensation Committee or its delegate relating to the claim, but only to the extent that



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it was previously provided as part of the initial decision or appeal request on the claim.

The arbitrator may grant a claimant's claim only if the arbitrator determines it is justified based on: (i) the Compensation Committee, or its delegate erred upon an issue of law in the appeal request, or (ii) the Compensation Committee's, or its delegate's, findings of fact during the appeal process were not supported by the evidence.

(F) The arbitrator shall issue a written opinion to the parties stating the essential findings and conclusions upon which the arbitrator's award is based. The decision of the arbitrator will be final and binding upon the claimant and the Company. A reviewing court may only confirm, correct, or vacate an award in accordance with the standards set forth in the Federal Arbitration Act, 9 U.S.C. §§ 1-16.

(G) In the event any court finds any portion of this procedure to be unenforceable, the unenforceable section(s) or provision(s) will be severed from the rest, and the remaining section(s) or provisions(s) will be otherwise enforced as written.

#### 8.7 Application

Should a Forfeiture Event occur, this Article VIII is in addition to, and does not in any way limit, any other right or remedy of the Affiliated Companies, at law or otherwise, in connection with such Forfeiture Event.

\* \* \*

IN WITNESS WHEREOF, this Plan is hereby executed by a duly authorized officer on this 27<sup>th</sup> day of January, 2012.

NORTHROP GRUMMAN CORPORATION

By: /s/ Denise M. Peppard  
Denise Peppard  
Corporate Vice President and  
Chief Human Resources Officer

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**APPENDIX A – COMMITTEES AND APPOINTMENTS**

Notwithstanding anything to the contrary in this Plan, effective as of October 25, 2011, the Chief Executive Officer of the Company shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (including as such responsibilities are described in Article VI of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

**FIRST AMENDMENT TO THE  
NORTHROP GRUMMAN CORPORATION  
SUPPLEMENTAL RETIREMENT REPLACEMENT PLAN**

This amendment to the January 1, 2008 restatement of the Northrop Grumman Corporation Supplemental Retirement Replacement Plan (the "Plan") adds Appendix B to the Plan, effective as of the adoption of this amendment, to read as follows:

**APPENDIX B – COMMITTEES AND APPOINTMENTS**

Notwithstanding anything to the contrary in this Plan, the Chief Executive Officer of Northrop Grumman Corporation shall appoint, and shall have the power to remove, the members of (1) an Administrative Committee that shall have responsibility for administering the Plan (as such responsibilities are described in Section 4.1 of the Plan) and (2) an Investment Committee that shall have responsibility for overseeing any rabbi trusts or other informal funding for the Plan.

IN WITNESS WHEREOF, Northrop Grumman Corporation has caused this Amendment to be executed by its duly authorized representative on this 25 day of October 2011.

**NORTHROP GRUMMAN CORPORATION**

By: /s/ Debora L. Catsavas

Debora L. Catsavas  
Vice President, Compensation, Benefits &  
International Human Resources

**NORTHROP GRUMMAN CORPORATION**  
**COMPUTATION OF RATIO OF EARNINGS TO FIXED CHARGES**

<i>\$ in millions</i>	Year Ended December 31				
	2011	2010	2009	2008	2007
<b>Earnings:</b>					
Earnings from continuing operations before income taxes	<b>\$3,083</b>	\$2,366	\$ 2,070	\$ 1,841	\$2,158
<b>Fixed Charges:</b>					
Interest expense, including amortization of debt premium	<b>221</b>	269	269	271	312
Portion of rental expenses on operating leases deemed to be representative of the interest factor	<b>140</b>	149	167	177	177
Earnings from continuing operations before income taxes and fixed charges	<b>\$3,444</b>	\$ 2,784	\$2,506	\$2,289	\$2,647
<b>Fixed Charges:</b>					
Ratio of earnings to fixed charges	<b>9.5</b>	6.7	5.7	5.1	5.4

(1) Certain prior-period information has been reclassified to conform to the current year's presentation, including the effect of the spin-off of Shipbuilding.

**NORTHROP GRUMMAN CORPORATION SUBSIDIARIES****Address for all subsidiaries is:****c/o NORTHROP GRUMMAN CORPORATION  
Office of the Secretary  
2980 Fairview Park Drive  
Falls Church, Virginia 22042**

Name of Subsidiary	Jurisdiction of Incorporation	Ownership Percentage
Northrop Grumman Systems Corporation	Delaware	100%

The company has additional subsidiaries, which considered in the aggregate or as a single subsidiary, do not constitute a significant subsidiary.

All above listed subsidiaries have been consolidated in the company's consolidated financial statements.

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement Nos. 033-59815, 033-59853, 333-67266, 333-100179, 333-107734, 333-121104, 333-125120, 333-127317, and 333-175798 on Form S-8; and Registration Statement No. 333-175818 on Form S-3; of our reports dated February 7, 2012, relating to the financial statements of Northrop Grumman Corporation and the effectiveness of Northrop Grumman Corporation's internal control over financial reporting, appearing in this Annual Report on Form 10-K of Northrop Grumman Corporation for the year ended December 31, 2011.

/s/ Deloitte & Touche LLP

McLean, Virginia

February 7, 2012

**POWER OF ATTORNEY IN CONNECTION WITH THE  
2011 ANNUAL REPORT ON FORM 10-K**

KNOW ALL MEN BY THESE PRESENTS, that each of the undersigned directors and officers of NORTHROP GRUMMAN CORPORATION, a Delaware corporation, does hereby appoint SHEILA C. CHESTON and JENNIFER C. MCGAREY, and each of them as his or her agents and attorneys-in-fact (the "Agents"), in his or her respective name and in the capacity or capacities indicated below, to execute and/or file the Annual Report on Form 10-K for the fiscal year ended December 31, 2011 (the "Report") under the Securities Exchange Act of 1934, as amended (the "Act"), and any one or more amendments to any part of the Report that may be required to be filed under the Act (including the financial statements, schedules and all exhibits and other documents filed therewith or constituting a part thereof) and to any part or all of any amendment(s) to the Report, whether executed and filed by the undersigned or by any of the Agents. Further, each of the undersigned does hereby authorize and direct the Agents to take any and all actions and execute and file any and all documents with the Securities and Exchange Commission (the "Commission"), which they deem necessary or advisable to comply with the Act and the rules and regulations or orders of the Commission adopted or issued pursuant thereto, to the end that the Report shall be properly filed under the Act. Finally, each of the undersigned does hereby ratify each and every act and documents which the Agents may take, execute or file pursuant thereto with the same force and effect as though such action had been taken or such document had been executed or filed by the undersigned, respectively.

This Power of Attorney shall remain in full force and effect until revoked or superseded by written notice filed with the Commission.

IN WITNESS THEREOF, each of the undersigned has subscribed these presents this 7th day of February 2012.

<u>/s/ Lewis W. Coleman</u> Lewis W. Coleman	Director
<u>/s/ Victor H. Fazio</u> Victor H. Fazio	Director
<u>/s/ Donald E. Felsing</u> Donald E. Felsing	Director
<u>/s/ Stephen E. Frank</u> Stephen E. Frank	Director
<u>/s/ Bruce S. Gordon</u> Bruce S. Gordon	Director
<u>/s/ Madeleine A. Kleiner</u> Madeleine A. Kleiner	Director

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<u>/s/ Karl J. Krapek</u> Karl J. Krapek	Director
<u>/s/ Richard B. Myers</u> Richard B. Myers	Director
<u>/s/ Aulana L. Peters</u> Aulana L. Peters	Director
<u>/s/ Kevin W. Sharer</u> Kevin W. Sharer	Director
<u>/s/ Thomas M. Schoewe</u> Thomas M. Schoewe	Director
<u>/s/ Wesley G. Bush</u> Wesley G. Bush	Chairman, Chief Executive Officer and President (Principal Executive Officer)
<u>/s/ James F. Palmer</u> James F. Palmer	Corporate Vice President and Chief Financial Officer (Principal Financial Officer)



**CERTIFICATION PURSUANT TO  
RULE 13a-15(e)/15d-15(e) OF THE SECURITIES EXCHANGE ACT OF 1934,  
AS ADOPTED PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Wesley G. Bush, certify that:

1. I have reviewed this report on Form 10-K of Northrop Grumman Corporation (“company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the company’s internal control over financial reporting that occurred during the company’s most recent fiscal quarter (the company’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting; and
5. The company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company’s auditors and the audit committee of the company’s Board of Directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company’s ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company’s internal control over financial reporting.

Date: February 7, 2012

**/s/ Wesley G. Bush**

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Wesley G. Bush  
Chairman, Chief Executive Officer and President

**CERTIFICATION PURSUANT TO  
RULE 13a-15(e)/15d-15(e) OF THE SECURITIES EXCHANGE ACT OF 1934,  
AS ADOPTED PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, James F. Palmer, certify that:

1. I have reviewed this report on Form 10-K of Northrop Grumman Corporation (“company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the company’s internal control over financial reporting that occurred during the company’s most recent fiscal quarter (the company’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the company’s internal control over financial reporting; and
5. The company’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company’s auditors and the audit committee of the company’s Board of Directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company’s ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company’s internal control over financial reporting.

Date: February 7, 2012

**/s/ James F. Palmer**

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James F. Palmer  
Corporate Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Northrop Grumman Corporation (the “company”) on Form 10-K for the year ending December 31, 2011, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Wesley G. Bush, Chairman, Chief Executive Officer and President of the company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13a-15(e)/15d-15(e) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

Date: February 7, 2012

**/s/ Wesley G. Bush**

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Wesley G. Bush  
Chairman, Chief Executive Officer and President

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Northrop Grumman Corporation (the “company”) on Form 10-K for the year ending December 31, 2011, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, James F. Palmer, Corporate Vice President and Chief Financial Officer of the company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13a-15(e)/15d-15(e) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the company.

Date: February 7, 2012

**/s/ James F. Palmer**

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James F. Palmer  
Corporate Vice President and Chief Financial Officer

