

UNITED STATES AIR FORCE

ANNUAL FINANCIAL STATEMENT

GENERAL FUNDS

FISCAL YEAR 1999

REQUIRED SUPPLEMENTARY
STEWARDSHIP INFORMATION

REQUIRED SUPPLEMENTARY STEWARDSHIP INFORMATION

NATIONAL DEFENSE PROPERTY, PLANT, AND EQUIPMENT

*For Fiscal Year Ended September 30, 1999
(Stated in Number of systems or Items)*

(a) National Defense PP&E	(b) As of 10/01/98	(c) Additions	(d) Deletions	(e) As of 9/30/99	(f) Condition % Operational
1. Aircraft					
A. Combat	4,473	16	231	4,258	71
B. Airlift	1,902	20	85	1,837	94
C. Other Aircraft	2,595	17	148	2,464	69
2. Guided, Self-propelled Ordnance					
A. Missiles	69,331			80,360	76
3. Space systems					
A. Satellites	61	7	1	67	100
4. Weapon System Support Real Property					
A. Active Ammunition bunkers	4,077		37	4,040	100
B. Active Missile Silos	951		150	801	100
C. Active Satellite Ground Stations				81	100

Narrative Statement

As of the date these statements were prepared, the Federal Accounting Standards Advisory Board (FASAB) had not determined the final reporting requirements for National Defense property, plant and equipment (ND PP&E). Therefore, the Department of Defense (DoD) elected to report ND PP&E in FY 1999 in the same manner as ND PP&E was reported in fiscal year (FY) 1998. For FY 1998, the DoD implemented the proposed amendments to the Statement of Federal Financial Accounting Standards (SFFAS) No. 6 "Accounting for Property, Plant and Equipment," and No. 8, "Supplementary Stewardship Reporting." Those amendments required ND PP&E quantities, condition and investment trends to be reported for major types of ND PP&E. Since the FASAB did not adopt the proposed amendments to SFFAS No. 6 and No. 8, in electing to report in accordance with the proposed amendments to the standards, the DoD is not in full compliance with the existing reporting requirements contained in SFFAS No. 8 (SFFAS No. 8 requires the Department to report acquisition costs). The DoD cannot fully comply

with the SFFAS No. 8 reporting requirements because many of the Department's ND PP&E accountability and logistics systems do not contain a value for all or a portion of the ND PP&E assets. These systems were designed for purposes of maintaining accountability and other logistics requirements of ND PP&E, and not for reporting on the value of ND PP&E. Consequently, many of these systems do not accumulate costs or otherwise report values for individual items of ND PP&E.

The NDP&E cost information is captured in the DoD accounting systems and reported in the Air Force's "Statement of Net Costs". However, the Air Force's accounting systems were designed to provide appropriated fund accounting reports required by the Congress, the DoD and other applicable federal agencies. In addition, the Air Force's accounting systems were not designed to accumulate and retain costs for individual items of ND PP&E. Further, in many instances, even where values were recorded for some ND PP&E in some of the Air Force's systems, documentation (such as copies of purchase receipts) no longer is available

to support such amounts. In part, such documentation is not available, because until recently, the Air Force was not required to maintain such documents for audit purposes. According to Title 36, Code of Federal Regulations, Chapter XII, “National Archives and Records Administration,” receipts for the purchase of items such as ND PP&E are required to be retained for only 6 years and 3 months. Therefore, much of the supporting documentation that would be required to validate the reported values of ND PP&E for audit purposes no longer is available.

Due to the difficulties noted above, implementing the reporting requirements of the SFFAS No. 8 would be an enormous undertaking involving significant costs (requiring the expenditure of perhaps hundreds of millions of dollars). Given the complexity of the reporting requirements contained in the SFFAS No. 6 and SFFAS No. 8, the enormous cost of implementing those reporting requirements and the interim nature of the current reporting requirements, the Air Force is continuing its FY 1998 reporting display until such time as the Air Force has a better indication of the more permanent reporting requirements expected to be recommended by the FASAB. In the meantime, the Air Force believes that the most reasonable and responsible course of action is to report quantity information for the DoD’s weapons systems until such time as the FASAB adopts permanent reporting requirements for ND PP&E.

1. Aircraft

The Air Force, as of September 30, 1999, had 8,559 aircraft in its inventory. Not included in this number are approximately 743 aircraft in salvage at the Aerospace Maintenance and Regeneration Center (AMARC) in various stages of being dismantled. The 53 aircraft added to the inventory in FY 1999 were acquired by means of contracts from the private sector. The 464 aircraft deleted were the result of sales (foreign military), reclamation projects at AMARC (dismantled) and crashes. All active and inactive aircraft, except for reclamation aircraft at AMARC, are accounted for in the Equipment Inventory, Multiple Status and Utilization Reporting System (EIMSURS), a subsystem to the Reliability & Maintainability

Information Management System (REMIS). The aircraft inventory is maintained on a daily basis as to assignment, possession, and condition. Based on further research, the Air Force reclassified some of the aircraft among combat, airlift and the “other” category. This resulted in a restatement of the beginning inventories for this year.

2. Guided, Self-propelled Ordnance

- a. The Air Force currently has 2,441 Intercontinental-range Ballistic Missiles (ICBMs) in their active and inactive inventory, consisting of Minuteman, Peacekeeper, and air-launch cruise missiles. All complete missiles are accounted for, as to quantities and readiness, by the Equipment Inventory, multiple Status and Utilization Reporting System (EIMSURS). The Air Force also has one ICBM located at AMARC that is in the process of being dismantled. In addition to the ICBMs, the Air Force also has 77,919 tactical missiles having some form of guidance system that allow them to steer towards, rather than be aimed at, the target. Included are surface-to-air, air-to-air, and air-to-surface missiles, consisting of Sparrows, Sidewinders, AMRAAMS, Mavericks, Harpoons, and Harms. Not included in the above data are quantities of other tactical missiles considered secret. The tactical missile inventories are maintained in the Air Force Combat Ammunition System (CAS-A), the Army’s Standard Depot System (SDS), the Air Force Item Manager’s Wholesale Requisition System (IMWRP) and various diverse manual systems. As a result of the diversity of systems, numerous tactical missiles may not have been reported in FY 1998. The Air Force is in the process of interfacing all ammunition systems to avoid missing or duplicate data, and to provide better controls of all munitions. Until this process is completed, along with other internal systemic processes associated with Consumption Accounting, the Air Force cannot provide the quantitative data for acquisitions and deletions made during the year.
- b. The Air Force systems, except for EIMSURS, could not provide data for the total number of

missiles purchased (additions), or disposed of (deletions) during the course of the FY. This is due, in part, to system limitations. Most Air Force systems were designed to just keep track of inventories, not retain all data that was acquired and deleted during the year. The Air Force is working on system modifications to capture this type of data.

3. Space Systems

The Air Force currently has 67 unclassified satellites in either operational orbit (43) or storage with contractors (24). The 67 unclassified satellites consist of 10 DMSP, 14 DSCS, 41 GPS and 2 MILSATCOM. During 1999, 5 GPS, 1 DMSP and 1 MILSATCOM satellites were acquired from contractors. The Air Force also has other classified satellites (DSP) in operational orbit or storage that are not reported in the above quantitative data. During FY 1999, one MILSATCOM satellite, valued at approximately \$1.6 billion, was destroyed during an unsuccessful launch. In addition to the above satellites, the Air Force has other miscellaneous satellites (quantity unknown) that are not reported. In most cases, these satellites are

acquired or maintained out of Research, Development, Test & Evaluations funds. All Air Force national defense satellites reported as additions to the quantitative data were obtained by means of private sector contracts, while the one satellite reported as deleted was the result of a single launch failure. All satellites in operational orbit are considered to be in workable condition and are not subject to deferred maintenance.

4. Weapon System Support Real Property

The Air Force has 4,040 ammunition bunkers, 801 missile launch facilities and 81 satellite tracking and ground stations. The satellite ground stations were not reported as National Defense PP&E for 1998, but have been included this year, due to a change in policy. All active bunkers, missile launch facilities and satellite ground stations are considered in overall good condition. The facility condition was determined by visual inspection.

5. Deferred Maintenance

See Deferred Maintenance Required Supplementary Information for National Defense Property, Plant and Equipment.

NATIONAL DEFENSE PROPERTY, PLANT, AND EQUIPMENT YEARLY INVESTMENTS

For Fiscal Year Ended September 30, 1999

(In Millions of Dollars)

(a)	(b) FY 1998	(c) FY 1999
1. Aircraft		
A. Combat	\$ 2,028	\$ 3,347
B. Airlift	3,381	3,973
C. Other Aircraft	1,129	638
D. Aircraft Support Principal End Items		261
E. Other Aircraft Support PP&E		435
2. Guided, Self-propelled Ordnance		
A. Missiles	113	381
B. Guided, Self-propelled Ordnance Support PP&E	393	24
3. Space systems		
A. Satellites	517	1,438
B. Space Systems Support Principal End Items	537	443
4. Weapon System Support Real Property	None	None

Narrative Statement

1. The yearly investment costs for aircraft, missiles and satellites along with associated support principal end items were extracted from the DOLARS-Status of Funds System, which prepares the ACCT-RPT(M)1002 report. To arrive at the costs reported, Budget Program Activity Codes (BPACs) were identified for each major category, by type (combat, airlift, other, ICBM, other missiles, and satellites). Using these BPACs, an extract was then prepared to obtain the values reported. Excluded from our extract were BPACs reported for aircraft spares, repair parts, reimbursable program cost and undistributed costs. These costs were considered to be OM&S purchases.

2. Investment values included in the report are based on outlays (expenditures). Outlays are used instead of acquisition costs, because current DoD systems are unable to capture and summarize Procurement Appropriation acquisition costs in accordance with accounting standards.

3. Aircraft (See Note 1, previous section)

4. Aircraft Support Principal End Items. The Air Force has determined that uninstalled aircraft engines and avionics pods are to be reported as aircraft support principal end items for FY 1999. All aircraft engines, both installed and uninstalled are maintained in the Comprehensive Engine Management System (CEMS). This system tracks all engines from cradle to grave and provides maintenance history for each engine. The CEMS engine managers reported a beginning balance of 6,140 uninstalled engines for the Air Force and an ending balance of 6,099 as of September 30, 1999. Of this balance, 40 percent were considered in either "built up" or "raw" serviceable condition. The Air Force has designated RAMPOD as the system of record for all electric combat and integrated system pods. Currently, the Air Force has three of the five different types of pods, totaling 2,370. This includes Electronic Warfare Countermeasures Systems pods, Air Combat Maneuvering Instrumentation Pods and Electronic Warfare Tactical Simulation Pods. The pods currently not

in RAMPOD include the Precision Attack Low Attitude Navigation and Targeting System pods and Terrain Aerial Reconnaissance System pods. These pods are scheduled to be integrated into RAMPOD by the end of FY 2000 and will be included in the FY 2000 report. RAMPOD was designed to track each pod from cradle to grave and provide accurate maintenance data in order for Air Force managers to make sound fiscal and operational decisions.

5. Other Aircraft Support PP&E. The Air Force, in FY 1999, implemented a new module to the Air Force Equipment Management System (AFEMS) to control and report all equipment, both general and ND PP&E. The Air Force has determined that assets acquired from aircraft funding (appropriation 3010) with budget code “Q” - Aircraft Weapon Systems and Peculiar Support Equipment would be considered other aircraft support PP&E. Examples of this category are adapters and noise suppressor. This category includes General Mission Support PP&E. The Air Force defines General Mission Support PP&E as items acquired from various procurement funds with budget code “A”. Examples of this type of equipment are engine test sets, aircraft brake test sets, and aircraft insulation test sets. All these items were acquired from the private sector by means of various contracts.

6. Guided Self-propelled Ordinance (See Note 2, previous section)

- a. The Air Force has identified 2,701 ND PP&E items for Guided, Self-propelled Ordinance Support PP&E. These quantities were obtained

from the Air Force Equipment Management System and include assets acquired with missile procurement funding (Appropriation 3020) with Budget Codes “E” - Missile Replacement Equipment and Procurement, budget code “P” – Missile Weapon Systems and Peculiar Support Equipment, and budget code “H” - Nuclear Ordinances. Examples of these categories are missile altimeter testers, guided missile maintenance stands, bomb guidance test sets, and fixture test sets.

- b. The Air Force, for FY 1999, has determined that missile motors for the ICBMs are considered to be Guided, Self-propelled Ordinance Support Principal End Items. In FY 1999, the Air Force had in their inventory 1,659 extra ICBM motors consisting of Minuteman I, II, III, stages 1, 2, 3, and 4, Peacekeepers, stages 1, 2, 3, and 4. Of this inventory, only 683 were reportedly flight worthy. These missile motors, in addition to being maintained for the ICBM program as replacement spares, are being used by the Rocket System Launch Program to launch various different types of satellites, after modifications.

5. Space Systems (See Note 3, previous section)

The Air Force has 6 unexpended launch vehicles (Titan II) that are considered to be principal end items to the satellite program. The costs associated with launch vehicles will be added to the value of the satellite successfully or unsuccessfully launched to arrive at the full cost of the satellite.

HERITAGE ASSETS

For Fiscal Year Ended September 30, 1999

(a) Collection Type	(b) Measurement Quantities	(c) As of 10/01/98	(d) Additions	(e) Deletions	As of 9/30/99
1. Archeological Artifacts	Cubic Feet	1,752	0	0	1,752
2. Archival	Linear Feet	50,151	544	0	50,695
3. Artwork	Item	9,194	69	0	9,263
4. Historical Artifacts	Item	68,593	1,757	3,225	67,125
Non-collection Type					
5. Archeological Sites	Site	6,000	0	0	6,000
6. Buildings and Structures	Item	1,223	2,954	0	4,177
7. Cemeteries	Site	27	0	0	27
8. Memorials and Monuments	Item	147	4	0	151

Narrative Statement

1. Archeological Artifacts

The above information regarding archeological artifacts reflects the total Air Force inventory as governed by 36 CFR, Part 79, Curation. In most cases, the archeological artifacts have been discovered primarily during Air Force construction activities. Items found include American Indian artifacts, such as arrowheads, weapons and pottery. In addition, artifacts from colonial Americans have been found consisting of tools, pottery, and furniture, etc. The Department of Defense has sponsored an initiative to evaluate and inventory all archeological artifacts to meet the requirements of CFR 36, Part 65, Curation of Artifacts. The U.S. Corps of Engineers, St. Louis District, managed the archeological artifact project. The district has completed an assessment of each military service and documented the Air Force collection as being in good condition.

2. Archival

The above archival data pertains to the historically significant materials in the permanent collections of the Historical Research Agency located at Maxwell Air Force Base, Alabama, plus unique

and permanent documentation in other Air Force historical and museum repositories. For FY 1999, two separate entities reported data for this area. The Air Force Historian reported a beginning balance of 49,544 linear feet, acquisitions of 544 linear feet, no deletions, for an ending balance of 50,088 linear feet. The Air Force Environmental Division reported a beginning balance of 607 linear feet, no additions or deletions, and an ending balance of 607 linear feet. The items included in the collections are collected from various internal and external Air Force sources throughout the world. The increases made during the year reflect normal accessions. The Air Force rates the overall condition of the materials as good: almost all of the materials are protected in an environment suitable for long-term storage.

3. Works of Art

- a. The USAF art collection, consists of paintings, drawings, sketches and sculptures. During FY 1999 it was discovered that the FY 1998 beginning inventory was misstated. The correction is reflected above. The new art works acquired during FY 1999 were paintings donated by the respective artists or by others. Most of the Air Force art collection is considered to be in good

condition. The condition was determined by visual inspection of the art collection as a whole.

- b. The USAF Academy art collection also consists of paintings, drawings, sketches and sculptures. The USAF Academy reported a beginning inventory of 911 works of art, 1 addition to the collection, no deletions, and an ending balance of 912. The artist donated the new artwork. The USAF Academy art collection reports that all art is in acceptable condition. The condition was also determined by visual inspection.

4. Historical Artifacts

The historical artifacts reported above are registered as historical property in the USAF Museum System, headquartered at Wright-Patterson AFB, or the Air Force Academy Museum System, located at Colorado Springs, Colorado. They consist of items that display the material culture of the Air Force and its predecessor organizations, and include advances in technology, and significant persons, places, and events in Air Force history. Many of the items that are located at the USAF Museum System are one-of-a-kind, prototype, or products developed by the Research, Development, Test and Evaluation program. The USAF Museum System reported a beginning balance of 66,717 items in inventory, 1,738 items acquired, and 3,225 items deleted, with an ending balance of 65,230. Many of the items deleted were the result of paper items or less significant items being transferred to the control of major commands. The Air Force Academy reported a beginning balance of 1,876 items, acquisitions of 19, no deletions and an ending balance of 1,895. The overall condition of the collections is good; items are displayed and protected in accordance with the established standards as outlined in Air Force Instruction 84-103, USAF Museum System. In FY98, the Air Force reported the above historical artifacts under the category of Classic Weapon Systems.

5. Archeological Sites

The above information regarding archeological sites reflects the total Air Force inventory as gov-

erned by the National Historical Preservation Act. Of the total 6,000 archeological sites, 13 sites are listed on the National Register of Historical Places. The remainder are eligible for listing. Examples include a "Mound", referred to as the Wright-Patterson Air Force Base Mound, constructed between 500 BC and 400 AD by the Adena people which is 8.2' high and 86' in diameter. Another example is Pre-Columbian (1000-1499 AD) petroglyphs and pictographs found on canyon walls and large rocks, consisting of bighorn sheep, deer, and various figures and other symbols. These archeological sites are located within the Desert National Wildlife Range and the Nellis Range. The Air Force archeological sites are in good condition as documented by the Air Force in their submittal to the Department of Interior, for the Federal Archeological Report for FY 1998. Each Major Command is responsible for the care and maintenance of the archeological resources under their care, in compliance with the National Historic Preservation Act, and the Archeological Resources Protection Act. The Air Force archeological resources inventory is in compliance with both laws.

6. Buildings and Structures

- a. The Air Force currently considers 4,177 buildings and structures as heritage assets. Of this number, 1,831 buildings and structures are currently on the National Register of Historical Places. In 1998, the Air Force reported only those buildings listed on the National Register as heritage assets. However, for FY 1999, the Air Force, to be in compliance with reporting requirements, has also included those building and facilities eligible for listing. This is the main reason for the 2,954 increase being reported.
- b. Most of the buildings and structures reported as non-collection assets are considered to be multi-use heritage assets, and as such are being capitalized, depreciated and reported as general PP&E. In addition, deferred maintenance for these buildings is included in the General PP&E, Real Property Deferred Maintenance Table as part of the Required Supplementary Information.

REQUIRED SUPPLEMENTARY STEWARDSHIP INFORMATION

c. All buildings and structures are in acceptable condition.

7. Cemeteries

The Air Force has administrative and curatorial responsibilities for 27 cemeteries on their bases. All cemeteries are maintained in an acceptable condition. The condition is determined by annual visual inspections.

8. Memorials and Monuments

The memorials and monuments reported above, except for 28, are all located at the Air Force Academy in the air gardens and honor court. Most of these monuments and memorials honor specific individuals or cadet wings for various accomplishments. The 28 memorials, all with a cost that exceed \$100,000, are located on various Air Force bases throughout the United States. All are reported in acceptable condition.

STEWARDSHIP LAND

*For Fiscal Year Ended September 30, 1999
(Acres in Thousands)*

(a) Land Use	(b) As of 10/01/98	(c) Additions	(d) Deletions	(e) As of 9/30/99
1. Mission	7,719			7,719
Totals	7,719			7,719

Narrative Statement

The Air Force has 7,719,097 acres of mission-essential land under their administration. Of that amount, 7,593,473 acres were acquired through public domain, Executive Orders, Public Land Orders, Permits with the Department of Interior or Notes issued by the Air Force. The remainder of the land was obtained from private sector donations (9,494 acres), and from state and local governments (116,130 acres). Lands purchased by the Air Force, with the intent to construct buildings or facilities are considered general PP&E and are reported on the balance sheet. During the past

year, no additions or deletions to Stewardship Lands were recorded. All Stewardship Land, as reported, is in acceptable condition, based on its designated use. Some Stewardship Land is used for training, i.e. bombing ranges, and will have some cleanup costs associated with its use.

In FY 1998, the Air Force reported an ending balance of 7,700,000 acres of Stewardship Land. The FY 1999 beginning balance (7,719,000) was changed to reflect the most recent change in definition of what constitutes Stewardship Land.

Information on acreage in cemeteries and monuments is not available.

REQUIRED SUPPLEMENTARY STEWARDSHIP INFORMATION

NONFEDERAL PHYSICAL PROPERTY

Yearly Investment in State and Local Governments for Fiscal Years 1995 through 1999
(In Millions of Dollars)

(a) Categories	(b) FY 1995	(c) FY 1996	(d) FY 1997	(e) FY 1998	(f) FY 1999
Transferred Assets:					
1. National Defense Mission Related					
2. Environmental Improvement					
3. Base Closure and Realignment					
4. Other					
Total					
Funded Assets:					
1. National Defense Mission Related					
2. Environmental Improvement					
3. Base Closure and Realignment					
4. Other					\$ 16.6
Total					
Grand Total					\$ 16.6

Narrative Statement

Air National Guard investments in non-federal physical property are through the Military Construction Cooperative Agreements (MCCAs). These agreements involve the transfer of money only and allow joint participation with States, Counties and Airport Authorities for construction or repair of airfield pavements and facilities required to support the flying mission assigned at these civilian airfields.

INVESTMENTS IN RESEARCH AND DEVELOPMENT

Yearly Investment in Research and Development for Fiscal Years 1995 through 1999
(In Millions of Dollars)

(a) Categories	(b) FY 1995	(c) FY 1996	(d) FY 1997	(e) FY 1998	(f) FY 1999
1. Basic Research	\$ 380	\$ 216	\$ 228	\$ 212	\$ 206
2. Applied Research	599	596	650	583	562
3. Development					
Advanced Technology Development	2,074	848	652	491	483
Demonstration and Validation	2,638	914	890	1,190	1,295
Engineering and Manufacturing	3,015	4,927	4,667	4,371	4,200
Research, Development, Test and					
Evaluation Management Support	1,192	1,215	1,116	1,097	934
Operational Systems Development	1,791	3,909	6,232	6,798	6,810
Total	\$ 11,689	\$ 12,625	\$ 14,435	\$ 14,742	\$ 14,490

Note: The Values reported above do not include any undistributed disbursements.

Narrative Statement

1. Basic Research

The Air Force's Defense Research Sciences program funded the scientific disciplines that are core to developing future warfighting capabilities. Funding was provided to twelve scientific projects, with one project focused on education programs for scientists and engineers and international programs. The scientific projects were focused on atmospheric, biological sciences, chemistry, electronics, fluid mechanics, human performance, materials, mathematical and computer sciences, physics, propulsion, space sciences, and structures. The 1999 Nobel Prize for Chemistry was awarded to an Air Force-funded California Institute of Technology researcher.

2. Applied Research

The Air Force's Applied Research program is developing technologies to support both an air and space force of the future. Technology developments are focused in those areas that are essential

to future capabilities. This investment strategy recognizes the enabling technologies that are being developed by commercial industry and allows the Air Force to focus on those militarily-relevant technologies, that are not being developed by industry, in a laboratory environment. Two examples are Defensive Information Warfare technologies, focused on protecting critical computer networks from cyber attacks, and Mighty Sat I, which examined advanced space technologies, and was successfully Shuttle-launched, tested, and deorbited in FY99.

3. Advanced Technology Development

The Air Force's Advanced Technology Development invests in a broad range of technologies of direct warfighter interest. Two areas of note are turbine engine and space technologies. The turbine engine technology development and demonstration program is focused on improved performance and increased durability. The space technology program is focused on developing and demonstrating small satellites, affordable launch-

on-demand propulsion, sensors in space, space imaging, and satellite control.

4. Demonstration and Validation

Three examples of the Air Force's Demonstration and Validation efforts are: (1) Intelligence Advanced Development, which develops, demonstrates and evaluates near-real-time all source correlation/fusion capability by applying state-of-the-art data processing techniques for the receipt, correlation, templating and analysis of battlefield information necessary for transition from manual methods, (2) Airborne Laser Program, which will design, build and test a laser weapon system to acquire, track and kill Theater Ballistic Missiles immediately after launch, and (3) Advance EHF MILSATCOM, which develops and acquires satellites and cryptography with modifications of the mission control segment necessary to enable survivable, jam-resistant, worldwide, secure communications.

5. Engineering and Manufacturing Development

Three examples of the Air Force's Engineering and Manufacturing Development are: (1) Integrated Avionics Planning and Development, which will reduce avionics acquisition and support costs, increase weapons system performance and availability, and foster weapons system interoperability with standard interfaces, (2) B-1B Conventional Mission Upgrade Program (CMUP), which integrates conventional stand-off missile and smart-missile weapons technology to improve effectiveness and survivability while reducing total ownership costs, and (3) Specialized Undergraduate Pilot Training, which is a joint Air Force and Navy venture to obtain a Joint Primary Aircraft Training System and Ground Based Training Systems that will be used to train entry-level student aviators in the fundamentals of flying leading to fully qualified military pilots, navigators, and naval flight officers.

6. Research, Development, Test and Evaluation Management Support

Three examples of Research, Development, Test and Evaluation Management Support are: (1) Major Test and Evaluation Investment, which provides planning, improvements and modernization for three national asset test centers having over \$10 billion of unique test facilities/capabilities operated and maintained by the Air Force for DoD test and evaluation missions, and available to others having a requirement for their unique capabilities, (2) Test and Evaluation Support, which funds the infrastructure resources to operate the Air Force test activities in the Department of Defense Major Range and Test Facility Base (MRTFB), and (3) Pollution Prevention, which funds Class 0 pollution prevention (recurring work necessary to keep major test ranges and facilities open) and Class 1 work required to eliminate dependence on ozone depleting chemicals, and to correct non-compliance with federal, state or local environmental laws and work to comply with pollution prevention Executive Orders.

7. Operational Systems Development

Three examples of Operational Systems Development are: (1) Region/Sector Operations Control Center, which modernizes outdated C4I technology of the North American Aerospace Defense Command, (2) A-10 Squadrons, which develops A/OA-10 aircraft upgrades to enhance its ability to provide close air support for friendly land forces and to act as the forward air controller to coordinate and direct friendly air forces in support of land forces, and (3) the F-15E Squadrons, which exploit proven technological avionics advances and upgrades avionics, armament, air-frame and engines to maintain superiority against existing all-weather detection and kill capabilities.