

AM  
101  
.SGG  
A455

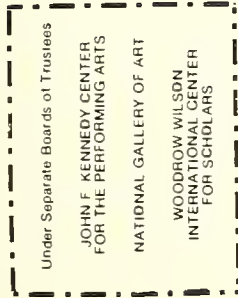
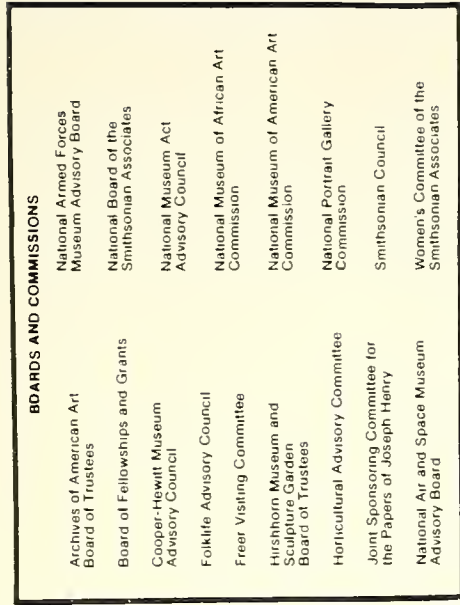
MSRL-SI  
Budget.

SMITHSONIAN INSTITUTION

FISCAL YEAR 1986

Justification of Estimates of Appropriations

# SMITHSONIAN INSTITUTION



**TREASURER\***

Business Management Office  
 Concessions  
 Mail Order Division  
 Smithsonian Museum Shops  
 Office of Accounting and Financial Services  
 Office of Grants and Risk Management

**GENERAL COUNSEL\***

**Directorate of INTERNATIONAL ACTIVITIES\***

International Center  
 Office of Publications Exchange  
 Office of Service and Protocol

**Director of MEMBERSHIP AND DEVELOPMENT\***

Development Office  
 Smithsonian National Associate Program  
 Smithsonian Resident Associate Program

**Assistant Secretary for SCIENCE\***

National Air and Space Museum  
 National Museum of Natural History/  
 National Museum of Man  
 National Zoological Park  
 Office of Educational Research  
 Office of Fellowships and Grants  
 Smithsonian Astrophysical Observatory  
 Smithsonian Environmental Research Center  
 Smithsonian Tropical Research Institute

**Assistant Secretary for HISTORY & ART\***

Anacostia Neighborhood Museum  
 Archives of American Art  
 Center for Asian Art  
 Freer Gallery of Art  
 Sackler Gallery of Art  
 Cooper-Hewitt Museum  
 Hirshhorn Museum and Sculpture Garden  
 Joseph Henry Papers  
 National Museum of African Art  
 National Museum of American Art  
 Renwick Gallery  
 National Museum of American History  
 National Portrait Gallery  
 Office of American Studies

**Assistant Secretary for PUBLIC SERVICE\***

Office of Elementary and Secondary Education  
 Office of Folklife Programs  
 Office of Public Affairs  
 Office of Smithsonian Symposia and Seminars  
 Office of Telecommunications  
 Smithsonian Institution Press  
 Smithsonian Magazine  
 Visitor Information and Associates  
 Reception Center

**Assistant Secretary for MUSEUM PROGRAMS\***

Conservation Analytical Laboratory  
 National Museum Act  
 Office of Exhibits Central  
 Office of Horticulture  
 Office of Museum Programs  
 Office of Research and Construction  
 Smithsonian Institution Archives  
 Smithsonian Institution Libraries  
 Smithsonian Institution Traveling Exhibition Service

**Assistant Secretary for ADMINISTRATION\***

Contracts Office  
 Management Analysis Office  
 Office of Equal Opportunity  
 Office of Facilities Services  
 Office of Information Construction  
 Office of Plant Services  
 Office of Protection Services  
 Office of Information Resource Management  
 Office of Personnel Administration  
 Office of Printing and Photographic Services  
 Office of Programming and Budget  
 Office of Special Services  
 Office of Supply Services  
 Travel Services Office

\*Secretary's Management Committee

February, 1984  
1985

Distribution of FY 1985 Budget to Congress

- Ordered from Duplicating: 250 Copies
- 2 printers sets (1 side only)
- 1 3-hole punched copy

SENATE: Linda Richardson  
1-3 hole punched copy (tabbed); printed on both sides  
20-regular books (tabbed)

HOUSE: Fred Mohrman  
1-printers set (1 side only)  
31-regular books (tabbed)

Ex. Com: Ripley, Hughes, Hobbins, Jameson, Taylor, Coudon, Fern, Reinhardt,  
(15) Richards, Rinzier, Peyton, Symington, Powers, Challinor and Ms. Hird

Congressional Liaison: 12 regular books

OPB Staff; 1 each tabbed (15)

- Other Special: Fran Rooney - tabbed
- Bob Farrell - tabbed
- Robert Adams-tabbed
- New Treasurer-tabbed

NOTE: Blue tabs for S&E activities, i.e. Science, used only on Jameson's, Clarke's, and other OPB staff and Adams



ADMINISTRATION

- 1400 Office of Equal Opportunity ✓
- 2400 Management Analysis Office ✓
- 2600 Travel Services Offices ✓
- 2700 Office of Supply Services ✓
- 2800 Office of Printing & Photographic Services ✓
- 2G00 Office of Information Resource Management ✓
- 1G00 Office of Special Events
- 1500 Special Assistant to the Secretary
- 1C10 Accounting Office
- 2200 Office of Audits ✓

*Office of Grant & Res. Mgmt*  
*Office of Contract Mgmt?*

FACILITIES SERVICES

- 2C00 Office of Protection Services ✓
- 2D00 Office of Design & Construction - 3 ✓
- 2F00 Office of Plant Services ✓



SMITHSONIAN INSTITUTION

FISCAL YEAR 1986 ESTIMATES OF APPROPRIATIONS

TABLE OF CONTENTS

	<u>Page</u>
ORGANIZATION OF THE SMITHSONIAN INSTITUTION	
GENERAL STATEMENT.....	1
SALARIES AND EXPENSES	
Summary Tables.....	9
Uncontrollable Increases and Restoration of Two Percent Reduction...	12
<u>Science</u>	
Office of the Assistant Secretary.....	23
National Museum of Natural History/Museum of Man.....	26
Smithsonian Astrophysical Observatory.....	34
Smithsonian Tropical Research Institute.....	39
Smithsonian Environmental Research Center.....	45
National Air and Space Museum.....	49
National Zoological Park.....	55
<u>History and Art</u>	
Office of the Assistant Secretary.....	60
National Museum of American History.....	63
National Museum of American Art.....	69
National Portrait Gallery.....	74
Hirshhorn Museum and Sculpture Garden.....	79
Center for Asian Art.....	83
Archives of American Art.....	92
Cooper-Hewitt Museum.....	97
National Museum of African Art.....	102
Anacostia Neighborhood Museum.....	109
<u>Public Service</u>	
Office of the Assistant Secretary.....	113
Smithsonian Institution Press.....	118

Museum Programs

Office of the Assistant Secretary.....	122
Office of the Registrar.....	125
Conservation Analytical Laboratory.....	127
Smithsonian Institution Libraries.....	133
Office of Exhibits Central.....	137
Smithsonian Institution Traveling Exhibition Service.....	140
Smithsonian Archives.....	146
National Museum Act.....	149

Directorate of International Activities..... 152

Special Programs

American Studies and Folklife Programs.....	156
International Environmental Science Program.....	160
Academic and Educational Programs.....	164
Collections Management/Inventory Program.....	172
Museum Support Center.....	178

Administration..... 183

Facilities Services

Office of Design and Construction.....	190
Office of Protection Services.....	193
Office of Plant Services.....	198

MUSEUM PROGRAMS AND RELATED RESEARCH

(SPECIAL FOREIGN CURRENCY PROGRAM).....	205
---	-----

FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION

Overview of Construction, Restoration and Renovation Programs.....	210
Construction and Improvements, National Zoological Park.....	211
Restoration and Renovation of Buildings.....	216
Construction: Quadrangle.....	239

APPENDIX

Appropriation by Object Class, Salaries and Expenses.....	A-1
Visitors to Smithsonian, FY 1980-FY 1984.....	A-2
Physical Plant Condition by Facility.....	A-3
Smithsonian Institution, Financial Summary, FY 1984-FY 1986.....	A-15
Treasurer's Report - FY 1984.....	A-16



## GENERAL STATEMENT

### Organization and Performance

Founded in 1846, the Smithsonian Institution is an independent Federal establishment devoted to public education, research and national service in the arts, sciences and history. Centered on The Mall in Washington, D.C., the Institution operates major facilities and activities throughout the country and overseas. It is one of the world's leading research centers and encompasses the world's largest museum complex, attracting millions of visitors annually to its museums, galleries and zoological park. Many others also view Smithsonian traveling exhibitions, which appear across the United States and abroad, and the annual Folklife Festival. As custodian of the National Collections, the Smithsonian possesses more than 100 million art objects, natural history specimens and artifacts. These collections are displayed for the enjoyment and education of visitors and are available for research by the staff of the Institution and by hundreds of visiting students, scientists and historians each year. Other significant study efforts draw their data and results directly from terrestrial, marine and astrophysical observations at various Smithsonian installations.

The Smithsonian complex presently consists of 13 exhibition buildings in Washington, D.C. and New York City in the fields of science, history, technology and art; a zoological park in Washington, D.C. and an animal conservation and research center near Front Royal, Virginia; the Anacostia Neighborhood Museum, which performs research and exhibit activities in a low income area of the city in cooperation with the community; a preservation, storage and air and spacecraft display facility at Suitland, Maryland; two natural preserves in Panama and on the Chesapeake Bay; a photo-biological laboratory in Rockville, Maryland; an oceanographic research facility at Link Port, Florida; astrophysical stations in Massachusetts and Arizona; and supporting administrative, laboratory and storage areas.

### Smithsonian Goals and Functions

The goal of the Smithsonian Institution is to promote the increase and diffusion of knowledge. To accomplish this goal, the Smithsonian conducts a broad variety of programs alone and in cooperation with other institutions, universities and government agencies in the United States and abroad. These programs include:

- Collections management: The Smithsonian Institution has the legal responsibility (20 U.S.C. 59) to serve as the official repository of the National Collections which contain more than 100 million art, technological and cultural history objects and natural history specimens and artifacts. The responsibility involves the acquisition, documentation and conservation of these materials along with detailed record keeping or cataloguing, regular inventories and storage or display in secure and atmospherically controlled environments.
- Basic research: Increase of knowledge is accomplished through basic research. As an independent Federal establishment, the Smithsonian conducts a broad range of scientific and scholarly research, often in cooperation with other institutions, universities and government agencies.
- Exhibitions, including performances and festivals or celebrations: These presentations constitute one means of diffusing knowledge on a wide scale. In Washington, D.C. and New York City, Smithsonian museums, galleries and the zoological park devote exhibit space to showing significant objects, specimens and animals from the permanent collections. In addition, temporary exhibitions with loan materials enhance these presentations, adding fresh concepts and ideas--

further enriching visitor experiences. Through the Smithsonian Institution Traveling Exhibition Service, over 100 exhibitions are seen annually by millions of people in most states and the District of Columbia. Live performances, festivals, celebrations, lectures and records also are enjoyed by millions of people.

- Education: Education programs of the Institution offer enormous variety in content and form; they range from in-depth, scholarly symposia to activities for fun and enjoyment and reach all ages from young children to senior citizens. They include classes and workshops, guided tours by trained docents, and radio, television and motion picture programs, sponsored by the individual museums and by centralized offices including Fellowships and Grants, Symposia and Seminars, and Elementary and Secondary Education. A significant aspect of the education effort involves production each year of several hundred publications including museum catalogues, books, scholarly monographs, articles, papers, the Archives of American Art Journal and Smithsonian magazine, which is now received by over 2 million Associates' families. At any given time, there are likely to be two to three hundred visiting scholars, scientists and students working throughout the Institution in various collections, laboratories and offices. Finally, as another educational endeavor, the Institution's Office of Museum Programs offers assistance to museums across the country and abroad by conducting museum training courses, producing and distributing audio-visual programs on conservation principles and techniques and by awarding grants for professional museum training and research.
  
- Collections acquisition: The Smithsonian museums acquire works of art, artifacts and specimens and other objects in three ways: by collecting, by donation and by purchase. Collecting and donation are and will continue to be the major means for acquiring materials for the collections. However, donations and gifts of collections, for the most part, do not lend themselves to planned development. If the Institution's research and exhibitions programs are to thrive, the collections must grow by thoughtful design. To meet this responsibility and challenge, the Smithsonian seeks to provide special acquisitions funds for the museums. Some Federal funds are requested each year to permit regular planned purchases.

In order to carry out these functions, administration and facilities services units of the Institution provide the required support. The Smithsonian has the responsibility for the maintenance, operation and protection of a large complex of museum and gallery buildings and other facilities. The Institution also provides architectural and engineering services for major repairs, alterations and improvements to the physical plant.

#### FY 1986 BUDGET PRIORITIES

The Smithsonian's FY 1986 budget request has three major objectives. The first is to provide adequate base resources to enable all of the Institution's museums, research organizations and support functions to carry out their existing programs effectively. Accordingly, substantial resources are included to restore the two percent across-the-board cut in the FY 1985 Interior and Related Agencies Appropriation Act, to correct longstanding base deficiencies in the Offices of Plant and Protection Services, and to meet expenses that essentially are beyond the Institution's control, consisting of inflation, higher utilities charges, mandated pay increases, and unemployment compensation costs. The second objective is to provide resources to enable the new facilities in the Quadrangle to open as scheduled -- to Smithsonian staff to be located there during FY 1986 and to the public during FY 1987. Major inaugural exhibitions are planned for the Quadrangle, including display in the Sackler Gallery of the entire magnificent collection of 1,000 objects; three important exhibitions in the new Museum of African Art -- "African Art and the Cycle of

Life," "African Textiles," and "African Art from the Permanent Collection"; and the opening show in the International Center, "Birth - A Ritual for Life." The third goal in the FY 1986 budget is to strengthen essential and highest priority Institutional efforts that were initiated in previous years. These consist of programs to provide an improved level of equipment support to research bureaus, to extend the benefits of automation throughout the Institution, and to further collection inventories. There also is provision in this year's request to complete staffing for the Museum Support Center and to continue purchases of collections storage equipment as the move of collections to the Center proceeds. An important initiative in the FY 1986 request involves the continuation and enhancement of support for the operations of American overseas research centers for advanced research.

With the new facilities in the Quadrangle scheduled to be completed during FY 1986, an additional Federal sum, to be matched with nonappropriated Trust funds, is essential for construction and for purchases of furnishings and equipment.

The FY 1986 request places continued emphasis on improvements to the physical plant. Building projects specifically designed to meet programmatic objectives in the areas of research, collections management and exhibitions are important also. The most noteworthy of these are planned for the Freer Gallery of Art, to create critically needed additional collections storage and conservation space; and for the Smithsonian Tropical Research Institute in Panama, to construct new facilities in support of research. There is provision also for the National Zoological Park to build a new animal hospital at Rock Creek Park that will facilitate good medical practice and assure the continuation of excellent health care to the Zoo's valuable animal collection.

#### I. SALARIES AND EXPENSES

<u>FY 1984 Actual</u>	<u>FY 1985 Base</u>	<u>FY 1986 Estimate</u>
\$156,581,000	\$166,185,000	\$179,790,000

The requested increase of \$13.6 million over the FY 1985 base consists of \$6.8 million for uncontrollable increases, \$3.3 million for restoration of the two percent across-the-board reduction in the FY 1985 Interior and Related Agencies Appropriations Act, and \$10.0 million for program increases offset by sums of \$5.8 million for a five percent pay reduction as recommended by the Office of Management and Budget and \$.7 million for a trustee grant to the John F. Kennedy Center. Uncontrollable increases include projected higher costs in FY 1986 compared with FY 1985 for staff, rental payments and utilities, and resources to help compensate for the effects of inflation in nonsalary areas. Restoration of the FY 1985 two percent reduction is critical to enable the approximately 65 museums, research organizations and offices of the Smithsonian to carry out approved programs effectively. Of the \$10.0 million being sought for program increases, \$.8 million will correct base shortages in essential support units -- the Office of Plant Services and the Office of Protection Services. In addition to providing initial operating increments to support units, including Smithsonian Institution Libraries, Smithsonian Institution Traveling Exhibition Service, Office of Exhibits Central, Office of Horticulture, Office of Protection Services, Office of Plant Services and Office of Personnel Administration (\$1.1 million), the Institution's FY 1986 Quadrangle request includes the majority of costs associated with inaugural exhibitions of the Sackler Gallery, the Museum of African Art, and the International Center (\$2.6 million). An amount of \$1.0 million is sought to further enhance research, education and automation programs of the Sackler Gallery and the Museum of African Art. Additional resources are sought also to strengthen the scientific programs at three bureaus through the establishment and enhancement of equipment upgrading and replacement

programs (\$.5 million); to further automated data processing capabilities at six museums, three administrative units, the Smithsonian Institution Libraries, and the Office of Information Resource Management (\$.8 million); to further inventory efforts of three museums and of the Archives of American Art (\$.3 million); and to complete staffing and support requirements for the Museum Support Center (\$.9 million). (There is provision also to retain \$3.3 million, the same amount as appropriated in FY 1985, to continue purchase of collections storage equipment for the Museum Support Center as the move of the collections to be stored there proceeds.) A sum of \$2.0 million is requested to provide support for the operations of American Overseas Research Centers for advanced research.

	<u>FY 1985 Base</u>	<u>Uncon- trollable Increases</u>	<u>2% Restor.</u>	<u>Program Increases</u>	<u>FY 1986 Estimate</u>
Science	\$56,277,000	\$1,895,000	\$1,123,000	\$ 500,000	\$59,795,000
History and Art	28,188,000	970,000	561,000	3,749,000	33,468,000
Public Service	2,317,000	73,000	46,000	--	2,436,000
Museum Programs	10,001,000	347,000	200,000	821,000	11,369,000
Directorate of International Act.	323,000	9,000	6,000	267,000	605,000
Special Programs	8,441,000	137,000	157,000	1,743,000	10,478,000
Administration	11,385,000	387,000	223,000	290,000	12,285,000
Facilities Services	49,253,000	2,996,000	985,000	1,920,000	55,154,000
Proposed Pay Reduction		<u>(5,800,000)</u>			<u>(5,800,000)</u>
Total	\$166,185,000	\$1,014,000	\$3,301,000	\$9,290,000	\$179,790,000

## II. Special Foreign Currency Program

<u>FY 1984 Appropriation</u>	<u>FY 1985 Appropriation</u>	<u>FY 1986 Estimate</u>
\$7,040,000	\$8,820,000	\$2,500,000

This program will allow the Smithsonian to continue a program of grants in those countries where "excess" local currencies are available. Research will be performed in the following areas of Smithsonian Institution interest and competence: archeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences and museum programs. Funds of \$2,500,000 are sought for FY 1986. The request includes amounts of \$1,480,000 for the grants program, and \$1,020,000 for the last of four increments of the U.S. contribution to restore and preserve the ancient city of Moenjodaro in Pakistan.

### III. Facilities Planning, Renovation, Restoration and Construction

<u>FY 1984 Appropriation</u>	<u>FY 1985 Appropriation</u>	<u>FY 1986 Estimate</u>
\$4,500,000	\$18,326,000	\$23,726,000

Construction and Improvements, National Zoological Park (\$4,851,000) - The FY 1986 appropriation request for Construction and Improvements at the National Zoological Park will be used to construct a hospital at the Rock Creek Zoo, and to continue the program of renovation, repairs and preventive maintenance of facilities at Rock Creek and at the Front Royal Conservation Research Center.

Restoration and Renovation of Buildings (\$14,875,000) - The FY 1986 appropriation request for Restoration and Renovation of Buildings consists of repairs to facades, roofs and terraces of various historical and monumental buildings; the upgrading, including planning and installation, of fire detection and suppression systems; the provision of improved access for the disabled; the correction of conditions that could be hazardous to the safety and security of the visiting public, staff and the collections; repairs and improvements to utility systems in several museum and collections storage buildings, including heating, ventilating and air conditioning systems and plumbing and electrical systems; general repairs and improvements that are required for a variety of purposes; and improvements in support of programmatic objectives, the most notable of which are major renovation at the Freer Gallery of Art and construction of facilities in support of research at the Smithsonian Tropical Research Institute.

Quadrangle Construction (\$4,000,000) - The FY 1986 request, to be matched by an equal amount of nonappropriated Trust funds, will be used for construction and for purchase of furnishings and equipment. A final sum of approximately \$4,000,000 in Federal monies, also to be matched with an equal share of nonappropriated funds, is anticipated to be sought in FY 1987 to complete the project.

#### NONAPPROPRIATED SOURCES OF FUNDING

In addition to the support provided by Federal appropriations, the Institution also receives nonappropriated funds to expand and enrich its programs. The Nonappropriated Fund activities (Trust funds) are presented along with the Federal budget request to provide an overview of all uses of funds for each Smithsonian bureau. It must be emphasized that the estimates for Trust funds are subject to change due to the unpredictability of donations, grants and contracts to the Institution, fluctuations in visitor attendance and uncertain economic factors affecting restaurant and shop revenues, Associates' memberships and other auxiliary activities. The Institution's gross operating revenue, less the expenses of the auxiliary activities, represents the net operating revenue available for programmatic and other worthwhile purposes.

The FY 1985 Trust budget comprises approximately 49 percent of the total Institution's gross operating revenues or approximately 23 percent of net operating revenues. Included in the above are Federal grants and contracts received from government agencies. These are expected to total approximately \$16 million in FY 1985. Gross revenues of nonappropriated Trust funds (excluding Federal grants and contracts) are expected to continue to grow as in previous years and reach \$140 million in FY 1985. Net income, however, is projected to remain in the \$33 million to \$35 million range (of which nearly \$11 million is projected for restricted purposes).

The Trust funds are composed of unrestricted funds, restricted funds and Federal grants and contracts and are applied in the following manner:

## A. Unrestricted Funds

1. General - Central management and administrative service units of the Institution, such as legal counsel, accounting, personnel, supply and budget receive Trust allotments whose costs primarily are funded from overhead recovery on grants and contracts received by the Smithsonian and from internal administrative fees charged to other Trust-funded activities. Operating funds are provided to various activities such as the Visitors Information and Associates' Reception Center, the Cooper-Hewitt Museum, Smithsonian Tropical Research Institute, Office of Telecommunications and the Office of Folklife Programs along with a variety of program allotments for important Institutional and bureau needs as approved by the Board of Regents. These allotments primarily are funded from short-term investment income, unrestricted endowment income and net proceeds from museum shops, food service concessions, sales of Smithsonian books, records and other products based on designs and objects in the collections, and from the Resident Associate and National Associate Programs (including Smithsonian magazine).

2. Special Purpose - Certain bureaus have income-producing activities, the largest of which are the Theater and Spacearium operations of the National Air and Space Museum. Also included in this category are miscellaneous bureau revenues from the sale of posters, exhibit brochures and publications; tuition grants from universities; the museums' share of sales in the restaurant and museum shops; membership and admission fees; exhibit rental; and investment income from current fund balances.

Beginning in FY 1979, the Board of Regents approved using the Institution's unrestricted Trust funds for certain programs previously financed with appropriated funds. These consist of the Institution's various fellowship programs (FY 1985 allotment of \$1.98 million) and the appropriate Trust fund share of rental costs of administrative units in L'Enfant Plaza, funded in part from rental payments by auxiliary activities occupying space on The Mall (FY 1985 allotment of \$720,000). In FY 1984, the final planned amount of \$2.7 million in unrestricted Trust funds has been provided for the Quadrangle construction project, in addition to the approximately \$6.8 million of the Institution's unrestricted Trust funds that already had been set aside. A total of \$2.5 million has been set aside for the Museum Support Center, \$1.75 million for construction and \$750,000 for specialized equipment.

The Special Purpose category also includes awards from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program, the Research Opportunities Fund, the Smithsonian Society Awards Program, and the Special Exhibition Fund.

A substantial continuing commitment under this category is the \$2.2 million annual allocation for the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program, first approved by the Board of Regents in FY 1978. Of the \$2.2 million, an amount of \$1.1 million is available annually for purchase of objects of outstanding importance to the collections.

During FY 1984, the Collections Acquisition portion of the Program was used to purchase a wide variety of objects throughout the Smithsonian museums. The National Portrait Gallery purchased the famous portrait of Mary Cassatt by Edgar Degas (1834-1917); FY 1985 marks the initial participation of the Arthur M. Sackler Gallery in the Collections Acquisition portion. The Gallery's first purchase was an extraordinary late 18th or early 19th century Japanese ceremonial palanquin (norimono) finished in lacquer; the National Museum of American Art acquired its first work by famed muralist Thomas Hart Benton, a 7 x 24 foot mural of "Achelous and Hercules"; and the National Museum of Natural History/Museum of Man bought the outstanding Brodzinsky Fossil Amber Collection. Each of these important acquisitions was supplemented by varying amounts of outside contributions. An additional amount of \$550,000 is designated by the Program for

scholarly research projects that do not lend themselves to or are not appropriate for Federal funding. These include multi-disciplinary research projects that can be carried out within and between bureaus and projects that have been awarded external funds, which require matching Trust amounts. For example, scientists at the Smithsonian Tropical Research Institute are engaged in a study to evaluate coral mortality and coral reef recovery in the eastern Pacific following the 1983 El Nino Southern Oscillation which brought widespread climate changes to the Pacific by a significant warming trend. Coral reefs play a major role in ocean ecosystems. Very little research has focused on why reef systems die, and how and why certain systems recover. The El Nino provides a unique opportunity to assess the effects which temperature may have on coral mortality, and rates of reef recovery. Apart from its importance in shedding light on important issues in coral ecology and evolution, findings from this study will assist governments in providing proper management to protect reef areas.

The remaining \$550,000 of the \$2.2 million available for this Program is allocated to conduct a wide range of such educational outreach programs of benefit to the public as: Office of Museum Programs - on-site workshops at small museums to share the Smithsonian's expertise and resources to help these museums improve the management and programming of their own facilities; Office of Public Affairs - a program of public service announcements for minorities; Office of Public Affairs and Office of Elementary and Secondary Education - development and testing of a series of articles that will serve as the prototype for an eventual magazine for those young people between the ages of 12 and 15; Astrophysical Observatory - a "Pre-College Curriculum Development Program in Astronomy" - assigned to use children's fascination with astronomy to aid in the teaching of science and mathematics in primary and secondary schools; Museum of American History - support for the pan-Smithsonian development and enrichment of historical public and scholarly activities and educational materials relating to Native Americans; Smithsonian Tropical Research Institute - field course in tropical ecology, in Spanish, for Panamanian university graduate students; Anacostia Neighborhood Museum - development of a checklist which would catalogue, for scholars and the interested public, the Museum's collected objects which originate from or pertain to black American culture; and National Zoological Park and National Museum of Natural History - development of a book on the history, philosophy, educational goals, and management of participatory exhibit areas, as exemplified by the Museum's Discovery Room, Naturalist Center, and the Zoo's Zoolab, Birdlab and Herplab.

Starting in FY 1985, the Board of Regents has approved an annual Trust-funded allocation for the Special Exhibition Fund. The cost of exhibition programs has generally been met with Federal funds which will continue to provide the predominant financing for the Institution's overall exhibition effort, as supplemented by donations from individuals, foundations and corporations. To be part of and administered similar to the Collections Acquisition, Scholarly Studies and Educational Outreach Program, the Special Exhibition Fund with \$3 million in FY 1985 will increase opportunities by providing funds for important temporary major exhibitions as proposed by organizations of the Institution. Subject to competitive review and selection process, the request must be for temporary special exhibitions of sufficient importance to provide benefit to the viewing public and accompanied by a scholarly catalogue or similar works. Exhibitions currently in the planning stage include: "Men of Greatness, Feats of Daring" by the National Museum of Natural History which will introduce to the American public the U.S. Exploring Expedition of 1838-1842 and establish its place in the development of natural and naval science in America; "Field to Factory: Afro-American Migration 1915-1940" by the National Museum of American History which will portray the movement of hundreds of thousands of Afro-Americans from southern states to northern urban centers during and after World War I; and "ZOOARK Twentieth Century: The Last Chance" by the National Zoological Park which will assert the importance of zoos for the future of many endangered species and for the development of public opinion on the relationship between man and animals.

B. Restricted Funds

Restricted Trust funds include gifts, grants and endowments from individuals, foundations, organizations and corporations which specify the use of the donation or bequest. Generally, these funds provide support for a particular exhibit or research project. The Freer fund is the largest restricted endowment of the Institution; it is strictly controlled under the terms of the original gift and bequest for the sole use of the Freer Gallery of Art.

C. Federal Grants and Contracts

Federal Grants and Contracts are provided by various agencies and departments for special projects which can be conducted at the Smithsonian because of its expertise in a particular area of science, history, art and education; and because of its ability to respond quickly to certain kinds of needs.



SALARIES AND EXPENSES



SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of FY 1986 Increase

Appropriation, FY 1985		\$162,415,000
Base Legislated Pay Requirement		<u>3,770,000</u>
Base, FY 1985		\$166,185,000
FY 1986 Requested Increase:		
Uncontrollable Increase	\$6,814,000	
Program Increase (Net)*	9,290,000	
Restoration of 2% Reduction	3,301,000	
Proposed Pay Reduction	<u>(5,800,000)</u>	
Total Requested Increase	\$13,605,000	
FY 1986 Request		\$179,790,000

\* Actual program increase totals \$10.0 million offset by a reduction of \$.7 million (trustee grant to the John F. Kennedy Center).

SMITHSONIAN INSTITUTION  
 "Salaries and Expenses"  
 Summary of the 1984 Appropriation and the 1985 and 1986 Estimates

(Dollars in Thousands)  
 FTE = Full Time Equivalent

Page No.	Unit	1984 Actual				1985 Base				1986 Estimate		Analysis of Increase		
		FTE	Amount	Appropriation	Supplemental Requirement/1	Total	FTE	Amount	FTE	Amount	FTE	Uncontrollable	Restored	%
<b>SCIENCE:</b>														
23	Asst. Secretary for Science	11	524	555	22	577	15	606	0	18	11	0		
26	National Museum of Natural History	490	18,734	20,011	532	20,543	510	21,890	0	687	410	250		
34	Astrophysical Observatory	86	7,441	8,374	140	8,514	83	8,966	0	281	171	0		
39	Tropical Research Institute	88	3,424	3,498	102	3,600	87	3,960	0	139	71	150		
45	Environmental Research Center	67	3,098	3,366	70	3,436	68	3,725	0	120	69	100		
49	National Air and Space Museum	213	7,477	8,122	209	8,331	211	8,779	0	282	166	0		
55	National Zoological Park	318	10,720	10,970	306	11,276	318	11,869	0	368	225	0		
	Subtotal, Science	1,273	51,418	54,896	1,381	56,277	1,292	59,795	0	1,895	1,123	500		
<b>HISTORY &amp; ART</b>														
60	Asst. Secretary for History and Art	10	598	418	17	435	9	457	0	13	9	0		
63	National Museum of American History	302	9,687	10,983	344	11,327	299	12,151	2	376	225	223		
69	National Museum of American Art	115	4,465	4,548	123	4,671	118	4,970	1	151	93	55		
74	National Portrait Gallery	81	3,216	3,295	91	3,386	82	3,620	0	127	67	40		
79	Hirshhorn Museum & Sculpture Garden	75	2,851	2,947	69	3,016	77	3,229	0	108	60	45		
83	Center for Asian Art	30	1,058	1,569	33	1,602	46	3,368	8	62	32	1,672		
92	Archives of American Art	16	693	724	23	747	16	819	0	17	15	40		
97	Cooper-Hewitt Museum	25	843	873	17	890	26	995	1	37	18	50		
102	National Museum of African Art	27	1,043	1,215	33	1,248	40	2,945	8	48	25	1,624		
109	Anacostia Neighborhood Museum	18	741	845	21	866	19	914	0	31	17	0		
	Subtotal, History and Art	699	25,195	27,417	771	28,188	732	33,468	20	970	561	3,749		
<b>PUBLIC SERVICE:</b>														
113	Asst. Secretary for Public Service	27	1,183	1,183	37	1,220	24	1,278	0	34	24	0		
118	Smithsonian Institution Press	28	1,023	1,061	36	1,097	29	1,158	0	39	22	0		
	Subtotal, Public Service	55	2,206	2,244	73	2,317	53	2,436	0	73	46	0		

Page No.	Unit	1984 Actual		Appropriation	Supplemental Requirement/1	Total	1986 Estimate		Analysis of Increase			
		FTE	Amount				FTE	Amount	FTE	Uncontrol- lable	Restored	%
<b>MUSEUM PROGRAMS</b>												
122	Asst. Secretary for Museum Programs	18	631	689	23	712	19	755	0	29	14	0
125	Office of the Registrar	2	90	93	3	96	2	102	0	4	2	0
127	Conservation Analytical Laboratory	27	1,494	1,746	41	1,787	40	2,197	4	63	36	311
133	Smithsonian Institution Libraries	97	3,759	4,173	89	4,262	96	4,813	3	168	86	297
137	Office of Exhibits Central	41	1,413	1,488	44	1,532	43	1,707	1	47	30	98
140	Traveling Exhibition Service	7	327	303	8	311	10	446	3	14	6	115
146	Smithsonian Archives	14	492	512	14	526	15	556	0	20	10	0
149	National Museum Act	3	785	773	2	775	3	793	0	2	16	0
	Subtotal, Museum Programs	209	8,991	9,777	224	10,001	228	11,369	11	347	200	821
152	<b>DIRECTORATE OF INTERNAT'L ACTIVITIES</b>											
		7	252	315	8	323	10	605	1	9	6	267
<b>SPECIAL PROGRAMS</b>												
156	American Studies & Folklife Programs	11	594	675	13	688	8	731	0	29	14	0
160	Int'l Environmental Science Program	11	687	698	8	706	13	747	0	27	14	0
164	Academic & Educational Programs	24	717	728	24	752	21	2,793	0	26	15	2,000
172	Collections Management/Inventory	46	879	840	18	858	38	1,147	0	22	17	250
178	Museum Support Center	40	5,002	4,729	22	4,751	39	5,060	4	33	97	179
	John F. Kennedy Center Grants	0	1,000	686	0	686	0	0	0	0	0	(686)
	Major Exhibition Program	0	522	0	0	0	0	0	0	0	0	0
	Subtotal, Special Programs	132	9,401	8,356	85	8,441	119	10,478	4	137	157	1,743
183	<b>ADMINISTRATION</b>											
		245	11,525	11,059	326	11,385	244	12,285	3	387	223	290
<b>FACILITIES SERVICES</b>												
190	Office of Design and Construction	36	1,833	1,990	54	2,044	35	2,159	0	54	41	20
193	Office of Protection Services	659	16,415	16,833	463	17,296	698	18,896	21	574	342	684
198	Office of Plant Services	420	29,345	29,528	385	29,913	464	34,099	21	2,368	602	1,216
	Subtotal, Facilities Services	1,115	47,593	48,351	902	49,253	1,197	55,154	42	2,996	985	1,920
	PROPOSED PAY REDUCTION (5%)		(5,800)					(5,800)				
	GRAND TOTAL	3,735	156,581	162,415	3,770	166,185	3,875	179,790	81	1,014	3,301	9,290

/1 Includes full FY 1985 pay supplemental requirement.

FY 1986 UNCONTROLLABLE INCREASES  
AND RESTORATION OF TWO PERCENT REDUCTION

Funds are sought to finance costs that are beyond the control of the Institution. These costs result from established practices in regulating wages; changes in utility rates; higher postage and communications charges; and the effects of inflation. Consequently, a total of \$6,814,000 is requested for these increases.

1. Salary and Related costs	
--Within-grade Step Increases	\$2,055,000
--One Additional Workday	413,000
--Unemployment Compensation	400,000
--Annualization of Legislated Pay Raises	1,072,000
--OMB Grade Target Reduction	-373,000
Total Salary and Related Costs	<u>\$3,567,000</u>
2. Utilities, Postage and Communications	
--Electricity	\$ 916,000
--Steam	321,000
--Gas	220,000
--Fuel Oil/Water	-7,000
--Communications	-28,000
--Postage	154,000
Total Utilities, Postage, Communications	<u>\$1,576,000</u>
3. Rental Space	\$ 345,000
4. Inflation	<u>\$1,326,000</u>
Grand Total, Uncontrollable Increases	<u>\$6,814,000</u>

SALARY AND RELATED COSTS - An amount of \$3,567,000 is required for the projected higher costs in FY 1986 for FY 1985 staff. These are provided to employees as a result of within-grade increases (\$2,055,000). Funds also are required in FY 1986 to cover increased costs attributable to one additional paid day (\$413,000), projected unemployment compensation (\$400,000), legislated pay raises granted employees in January 1985 (\$1,072,000), and a reduction due to the grade target reduction mandated by the Office of Management and Budget (OMB) affecting positions in grades GS 11 through 15 (-\$373,000). Costs are calculated using an automated program developed to compute costs on a position-by-position basis, taking into consideration workyears authorized by OMB, savings from turnover and vacancies filled at lower grades when possible.

Within-grade Step Increases - A sum of \$2,055,000 is sought in FY 1986 for within-grade step increases. For General Schedule employees, these increases are required by Section 5335 of Title 5, United States Code. Wage employees are covered by law and prevailing rates. Increases include the part-year cost of new actions scheduled to occur in the budget year, as well as the cost of annualizing step increases occurring in the current fiscal year.

The General Schedule portion of the request is \$1,660,000. There are approximately 2,700 General Schedule employees of whom an estimated 1,500 are slated to receive within-grade increases. The Wage portion of the request is \$395,000. There are approximately 900 Wage employees of whom an estimated 300 are scheduled to receive within-grade increases.

One Additional Workday - The annual rates of pay, as well as resources currently available for compensation to employees, are based on a 260-day workyear. Fiscal Year 1986 however, contains 261 workdays. Consequently, additional funding of \$413,000 is required to cover employee salaries and benefits costs for the full number of pay days that wages will be paid.

Unemployment Compensation - An amount of \$400,000 is requested in FY 1986 to cover the projected costs of Unemployment Compensation benefits for former employees. Public Law 96-499, the Omnibus Reconciliation Act of 1980, requires each Federal agency to pay State employment security offices for regular and extended unemployment compensation for former employees. These benefits prior to 1981 were paid by the Department of Labor from a separate appropriation provided to that agency. Since FY 1982, the Smithsonian has had to absorb the costs of unemployment compensation by reprogramming funds away from approved programs. These across-the-board reductions severely affect progress in the fundamental programs of each of the Smithsonian's 65 organizational units. Total amounts absorbed in previous years have been: FY 1982--\$337,000; FY 1983--\$446,000; and FY 1984--\$360,000.

Although costs for Unemployment Compensation are substantial in any year, the Smithsonian has taken measures to limit them. For example, in FY 1985, the Institution continues to contract with an independent firm for comprehensive cost control services including thorough review and evaluation of personnel procedures, direct claims handling, data processing, reporting and auditing--a process which also identifies illegitimate claims. In addition, supervisors and managers are provided, through formal classes conducted by the Smithsonian Office of Personnel Administration, guidance and instruction on hiring and other management practices to assist in lowering costs.

Annualization of Legislated Pay Raises - Funds of \$1,072,000 are required to annualize the cost of General Schedule, Merit Pay, Executive and Wage pay increases effective in FY 1985.

-- General Schedule, Merit Pay and Executive Schedule - In accordance with the pay plan established by the President under Section 5305 of Title 5, United States Code, annual salaries for Smithsonian General Schedule, Merit Pay and Executive level employees were increased in accordance with Public Law 98-473 on January 6, 1985. An amount of \$828,000 is required in FY 1986 to provide full-year funding for these legislated pay increases granted in FY 1985.

-- Wage Boards - Wage Board raises are granted under the authority of Section 5305 of Title 5, United States Code. Prevailing practices require Wage pay scales to be reviewed by a Wage Finding Authority in each geographic area. Public Law 98-473 provides that Wage Board employees receive the same pay increase as General Schedule employees. An amount of \$244,000 is requested to provide full-year funding in FY 1986 for Wage Board raises granted in FY 1985.

OMB Grade Target Reduction - At the direction of the President, OMB and the Office of Personnel Management (OPM) implemented in FY 1985 a joint initiative to improve the management of positions and lower the average grade levels in the GS/GM 11 to 15 grade range. For FY 1985, the reduction assessed the Smithsonian was \$187,000. For FY 1986, a sum of \$373,000 will be relinquished, the same amount as in FY 1987 and FY 1988. For FY 1989, the final year, the reduction will be \$186,000. The cumulative reduction over the five-year period will total \$1,492,000.

UTILITIES, POSTAGE AND COMMUNICATIONS - Currently, a base of \$14,124,000 is available to fund the costs of electricity, steam, gas, fuel oil, water, postage and communications. An additional \$1,576,000 is sought in FY 1986 to cover the projected increase for these items. The higher charges projected for electricity, steam, gas and postage are offset by slightly lower estimates for fuel oil, water and telephones. The

following tables show actual and anticipated use and costs of the components which comprise the utilities account between FY 1983 and FY 1986, and summarize the projected base shortage in each between the amount available in FY 1985 and the estimated charges for FY 1986.

ANALYSIS OF UTILITIES COSTS - FY 1983 - FY 1986

	<u>FY 1983</u> <u>Actual</u>	<u>FY 1984</u> <u>Actual</u>	<u>FY 1985</u> <u>Estimate</u>	<u>FY 1986</u> <u>Estimate</u>
<u>ELECTRICITY</u>				
<u>Use</u> - Millions of KWH	89.1	94.8	97.4	99.4
<u>Unit Cost</u> - Average per KWH	.0659	.0663	.0663	.0665
<u>Cost</u> - \$000s	\$5,873	\$6,287	\$6,455	\$6,607
FY 1986 Estimated Cost				\$6,608
FY 1985 Base				<u>\$5,692</u>
Base Shortage, Electricity				<u>\$ 916</u>
 <u>STEAM</u>				
<u>Use</u> - Millions of Pounds	198.4	203.6	206.5	219.4
<u>Unit Cost</u> - Average per 1,000 lbs.	14.55	15.50	15.50	15.50
<u>Cost</u> - \$000s	\$2,887	\$3,156	\$3,200	\$3,400
FY 1986 Estimated Cost				\$3,400
FY 1985 Base				<u>\$3,079</u>
Base Shortage, Steam				<u>\$ 321</u>
 <u>GAS</u>				
<u>Use</u> - Millions of Cubic Feet	1.087	1.468	1.500	1.500
<u>Unit Cost</u> - Average per Cu. Ft.	.6679	.7139	.8000	.8667
<u>Cost</u> - \$000s	\$726	\$1,048	\$1,200	\$1,300
FY 1986 Estimated Cost				\$1,300
FY 1985 Base				<u>\$1,080</u>
Base Shortage, Gas				<u>\$ 220</u>
 <u>FUEL OIL/WATER</u>				
<u>Costs</u> - \$000s	\$189	\$235	\$310	\$325
FY 1986 Estimated Cost				\$325
FY 1985 Base				<u>\$332</u>
Base Surplus, Fuel Oil/Water				<u>\$ 7</u>

Electricity - The major component (\$916,000) of the proposed utility increase is for electricity. Consumption estimates have been refined to take into consideration full occupancy of the Museum Support Center in Suitland, Maryland, and the new Quadrangle facilities on The Mall. Projected higher costs for electricity also take into consideration a 5.9 percent rate increase approved in FY 1984 by the District of Columbia Public Service Commission.

Steam - The projected shortage of \$321,000 for steam is attributable to consumption increases associated with the initial occupancy of the Quadrangle in 1986, correction of



the formula used to measure total consumption by the General Services Administration (GSA), and rate increases passed on to consumers by GSA in FY 1984 and in FY 1985.

Gas - For gas, the projected shortage of \$220,000 is attributable to increased consumption due to occupancy of the Museum Support Center and to space modifications to facilities at Suitland, Maryland and at the National Zoological Park. Also, higher rates are anticipated for gas resulting from increases in fuel costs which are passed on to consumers by the utility companies.

Fuel Oil/Water - The projected surplus for fuel oil/water (\$7,000) is attributable to fuel oil costs for the Museum Support Center that are less than previously anticipated.

ANALYSIS OF COMMUNICATIONS COSTS

	FY 1983	FY 1984	FY 1985	FY 1986
	<u>Actual</u>	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>
<u>TELEPHONE</u>				
<u>Costs</u> - \$000s	\$2,142	\$2,450	\$2,530	\$2,732
FY 1986 Estimated Cost				\$2,732
FY 1985 Base				<u>\$2,760</u>
Base Surplus, Telephone				<u>\$ 28</u>
 <u>POSTAGE</u>				
<u>Costs</u> - \$000s	\$822	\$1,300	\$1,200	\$1,335
FY 1986 Estimated Cost				\$1,335
FY 1985 Base				<u>\$1,181</u>
Base Shortage, Postage				<u>\$ 154</u>

Communications - The Institution continues to limit communications costs in fiscal years 1984 and 1985 through purchase of previously leased telephone equipment and through a program, begun in FY 1983, to reduce the escalating volume of FTS long distance calls. These programs are expected to continue reducing communications costs. Savings realized will be applied to cover higher charges for equipment repairs throughout the Institution and to cover the installation of new equipment in the Quadrangle.

Postage - The Institution is continuing the comprehensive program, begun in FY 1983, aimed at limiting postage costs. This program includes transmittal of information to all staff on the need to reduce the volume of all classes of mail, elimination of higher cost priority domestic packages, and increased oversight and control of international air parcel mailings. A projected shortage of \$154,000 is estimated for FY 1986. Projections are based on the results of two samples of one-week mailings performed by the Institution. The cost associated with the sample periods accounts for approximately 85 percent of the total charged by the United States Postal Service. The remaining 15 percent represents mailings paid on an actual basis as recorded by the United States Postal Service. This method easily reflects significant differences from year to year depending upon the volume of mail during the sample periods. For example, in FY 1983, the volume of mail during the sample period was low and costs decreased from \$1.058 million to \$822,000. In FY 1984, charges increased from \$822,000 to \$1.3 million. The amount projected for FY 1986 is based on estimates reflecting actual volume increases experienced between FY 1979 and FY 1983 and takes into account the savings resulting from the program that began in FY 1983 to limit escalating postage costs.

RENTAL SPACE - This item consists of rental space costs of the administrative activities located at L'Enfant Plaza, the Smithsonian Institution Service Center at 1111 North Capitol Street, Navy Yard Annex, and the Archives of American Art located in New York City and Boston, Massachusetts. The terms of current leases at L'Enfant Plaza and the Service Center require the Smithsonian to assume additional charges for operating expenses brought about by increases in maintenance, utility charges and taxes. The Federal rental share projected for FY 1986 totals \$1,671,000. A sum of \$1,326,000 is available in the base for FY 1985 and therefore an additional sum of \$345,000 is sought in FY 1986 for rental space at these locations.

Higher costs for space occupied by the Archives of American Art in New York are reflected in a new lease to replace the former one which expired in December 1984. Based on a survey of available space that was performed prior to entering into the new lease agreement, it was determined that alternative space in a comparable location would cost considerably more than the terms of the new lease agreement.

It had been anticipated that space leased for the Oceanographic Sorting Center at the Navy Yard Annex would not be required after the Sorting Center's move to the Museum Support Center. However, the Institution has identified a number of potential uses for this space which is available at a reasonable fee. Therefore, a sum of \$317,000 is requested in order to retain this space at the Navy Yard. In addition, rental costs projected for the Navy Yard take into account reclassification of this space by the General Services Administration. This explains the fluctuations in annual estimates for this space over the past several years.

FEDERAL RENTAL PROGRAM ADMINISTERED BY THE OFFICE OF PLANT SERVICES /1  
FY 1984 - FY 1986

(\$000s)

	FY 1984		FY 1985		FY 1986	
	Actual Cost		Estimated Cost		Estimated Cost	
	<u>Federal</u>	<u>Trust</u>	<u>Federal</u>	<u>Trust</u>	<u>Federal</u>	<u>Trust</u>
L'Enfant Plaza	\$ 454	\$ 611	\$ 477	\$ 642	\$ 518	\$ 674
N. Capitol St.	605	69	730	78	772	86
Navy Yard Annex	245	-	365	-	317	-
Archives of American Art						
- New York	21	-	50	-	58	-
- Boston	<u>6</u>	<u>-</u>	<u>6</u>	<u>-</u>	<u>6</u>	<u>-</u>
Total Costs	\$1,331	\$ 680	\$1,628	\$ 720	\$1,671	\$ 760
Base	<u>1,353</u>	<u>680</u>	<u>1,326</u>	<u>720</u>	<u>1,326</u>	<u>760</u>
Surplus/(Deficit)	\$ 22	\$ -	\$ (302)	\$ -	\$ (345)	\$ -

/1 Trust fund estimates are provided for the locations listed.

ENERGY CONSERVATION EFFORTS - To manage energy efficiently and to sustain the environmental conditions necessary for collections, the Institution is continuing its comprehensive energy management program. One effort involves the implementation of a complex automated power management system which has minimized substantially energy costs by reducing peak demands (through cycling motors on and off and, when necessary, selectively shutting down equipment) and monitoring all buildings for fluctuations in their established operating systems.

Another effort in promoting energy conservation in FY 1984, and planned for subsequent years is the continuation of the phased program of performing comprehensive building energy audits, and implementing renovation of heating, ventilating and air conditioning, plumbing and electrical systems in the Institution's facilities. (Plans and progress in developing energy efficient utilities systems are addressed in the Restoration and Renovation of Buildings section of this budget.) Improvements in these systems will produce the most significant energy savings to the Institution and provide stable temperature and humidity conditions necessary for the preservation of the collections.

Other continuing efforts to achieve more economical and efficient energy use include reducing lighting levels in work and nonpublic areas; installing more efficient lighting fixtures with new switching patterns and controls; operating heating and air conditioning systems at minimum levels required to prevent damage to collections; shutting down fans and other heavy consumers of electricity during nonpublic hours; continuing an awards program for employees who submit original suggestions to conserve energy that are implemented; and devoting greater attention to energy conservation when determining space use, modifying existing space, and designing new facilities.

INFLATION - Resources totaling \$1,326,000 are requested to help offset the cumulative and anticipated costs to the Smithsonian as a result of estimated inflation. The amount requested represents 4.2 percent (inflation factor allowed by the Office of Management and Budget) of total nonsalary expenses for FY 1985, excluding costs of utilities, rent and the Museum Support Center move and equipment. Inflationary increases represent significant costs that have the cumulative effect of seriously eroding research, exhibitions, collections management, education and public orientation programs, as well as facilities management and administrative services. The result of inflation, therefore, is equivalent to a significant cut each year to the base resources of all the Smithsonian's approximately 65 organizational units.

Research - Cost increases have a severe effect on the Institution's ability to carry out its programs. In the area of scientific research, prices for scientific supplies generally are not increasing as dramatically as they have in the past. However, the bureaus continue to experience significant price increases for the maintenance and repair of sophisticated scientific equipment.

The effects of inflation on costs for books, journals, papers and publishing, as well as research-related items, has had an impact on virtually all of the Institution's programs. The Smithsonian Institution Libraries purchases 50 percent of its scientific serials, which include journals and annual reports, from a serial subscription supplier. The price increase expected for FY 1985 from this supplier is projected to be 6.5 percent. The cost of series publications from other sources is expected to increase 10 percent in FY 1985. The average cost of a serial in FY 1984 was approximately \$88.70, and approximately \$365,000 in total was expended in that fiscal year. With a budget for binding books of nearly \$90,000, the Libraries is projecting an increase of eight percent in binding costs for FY 1985. Similar increases can be expected for FY 1986.

The cost of publishing, which is essential to scientific research as well as to exhibitions and educational programs, continues to increase. It is estimated that FY 1986 publishing charges will increase five to six percent above FY 1985. The following chart illustrates some further examples of price increases for items that are purchased regularly:

Research and Scientific Supplies and Contracts

<u>Item</u>	<u>FY 1984</u> <u>Cost</u>	<u>FY 1985</u> <u>Cost</u>	<u>Percentage Increase</u>
Beakers, stainless steel (1,000 ml.), each	\$ 24.00	\$ 26.20	9 percent
Liquid nitrogen/liter	56.70	59.50	5 percent
Annual contracts:			
Electronic laboratory instruments	2,940.00	3,145.00	7 percent
Electron microscope maintenance	6,504.00	7,020.00	8 percent
Deionized water service	3,120.00	3,660.00	17 percent

Exhibitions - Inflationary increases for materials and supplies place a severe strain on the base resources needed to maintain an active exhibition program. Great care is taken in selecting the appropriate materials for exhibition construction. Lumber, in particular, has become increasingly more expensive, while items such as wallboard, paint and plexiglas have witnessed a steady but more modest inflation rate. Certain occasions demand that special lighting be required not only as a comfort for the viewer but as a requirement for a delicate object on display. Frequently, these lamps, exhibiting particular qualities, also are expensive to purchase. The Institution spent over \$140,000 for lamps in FY 1984; the price for this item has increased by seven percent in FY 1985. The chart below illustrates cost increases for several items used extensively in exhibits preparation:

<u>Exhibition Materials</u>			
<u>Item</u>	<u>FY 1984</u> <u>Cost</u>	<u>FY 1985</u> <u>Cost</u>	<u>Percentage Increase</u>
Lumber, 2"x4"x16'	\$ 6.13	\$ 7.98	30 percent
Lumber, 4/4" sugar pine	2.39	3.00	26 percent
Lumber, 8/4" sugar pine	2.49	4.40	77 percent
Wallboard, 4'x12'x1/2"	10.87	11.76	8 percent
Wire, #12 THHN, 500' coil	13.36	17.50	31 percent
Paint, latex, white, (per gal.)	9.13	9.55	5 percent
Plexiglas:			
4'x8'x1/8", UF3	85.00	89.11	5 percent
4'x8'x1/4", UF3	120.00	126.94	6 percent
4'x8'x1/4", GM, clear	69.00	72.49	5 percent
Fluorescent lamp (used for display exhibits)	3.38	3.61	7 percent

Collections Management - Comprehensive collections management programs, essential to the preservation of the invaluable objects of the Institution, are not immune from inflationary effects and some price increases in this area are expected to be significant.

Among the items listed in the chart below, the increase in the cost of camera film, by approximately 16 percent between FY 1984 and FY 1985 merits mentioning. A large quantity of film is used by the bureaus for various purposes, such as photographing collections and making prints from old negatives. Over \$300,000 was expended by the Institution in FY 1984 for camera film, chemicals and associated supplies; \$90,000 has been obligated by the end of the first quarter of FY 1985 for purchases from four major suppliers. A list of additional samples illustrating cost increases for collections management items follows:

Collections Management Equipment and Supplies

<u>Item</u>	<u>FY 1984 Cost</u>	<u>FY 1985 Cost</u>	<u>Percentage Increase</u>
Air control filter, 30"x48"x6"	\$386.00	\$420.00	9 percent
Shutter assembly for X-ray diffraction system	455.00	490.85	8 percent
Gatorfoam, 4'x8'x1/2" (protective support for paper items)	26.50	29.85	13 percent
Foam core, 4'x8'x1/2"	40.32	44.80	11 percent
Straight jaw locking pliers, 7"	5.84	8.75	50 percent
Straight jaw locking pliers, 10"	6.30	9.45	50 percent
Bristle brush, 38 cm., 15" (for cleaning jars)	9.90	13.00	31 percent
Camel hair brush, 23 cm., 9" (for dusting balances)	4.00	4.50	13 percent
Scalpels, each	2.55	2.70	6 percent
Catheters, intracath, 50/box	115.00	124.00	8 percent
Blow dart needles, each (used at Zoo)	2.25	2.36	5 percent
Film, 64 ASA, 35 mm. (36 exposures)	3.74	4.35	16 percent
Polycontrast RC paper: 8"x10" for prints (250 sh.)	53.24	55.34	4 percent
8"x250' roll	61.36	63.77	4 percent

Facilities Management and Administration - Inflationary increases are experienced in the costs of security and safety items vital to the protection of visitors, collections and staff. It is estimated that \$387,000 will be expended in FY 1985 for security systems maintenance and repair, an increase of approximately six percent over the cost of similar services provided in FY 1984. Similar increases are anticipated for FY 1986. Safety glasses provided to workers whose jobs require eye protection are projected to increase in cost by nine percent in FY 1985. The Office of Protection Services expended approximately \$6,600 in FY 1984 for this item.

Charges for computer maintenance services for the Office of Information Resource Management are projected to increase six percent in FY 1986 and the cost of software is expected to increase 11 percent. The following prices indicate increases for several buildings maintenance supplies:

Buildings Maintenance Supplies

<u>Item</u>	<u>FY 1984</u> <u>Cost</u>	<u>FY 1985</u> <u>Cost</u>	<u>Percentage Increase</u>
Plastic bags, 55 gallon (case)	\$ 12.40	\$ 15.30	23 percent
Varicel filter, 24"x24"x12"	40.20	58.00	44 percent
5700 T/A filter, 24"x24"x2"	2.60	2.74	5 percent
Multifold paper towels	17.10	18.20	6 percent
1/2" copper pipe	8.20	13.60	66 percent
3/4" black pipe	8.82	14.28	62 percent
3/4" PVC pipe	5.20	6.40	23 percent
Lamps:			
Spot, 150RSP, 130 volt	3.20	3.39	6 percent
Fluorescent, F40W/U/6 (40 watt)	4.52	5.04	12 percent
Incandescent, 75PAR/SP/65WM	4.37	4.66	7 percent
Trash disposal (annual contract, one bureau)	2,268.00	2,424.00	7 percent
Pest control:			
1% Diazion, can, 23 oz., case	42.84	51.75	21 percent
2% Baygon, can, 23 oz., case	45.72	53.00	16 percent
Carbonate insecticide, gal.	48.90	54.40	11 percent

The request of a 4.2 percent increase to nonsalary funds is a modest one. The additional proposed resources of \$1,326,000 are vital to the integrity of virtually all programs of the Institution and will assist in restoring lost purchasing power due to the effects of inflation.

PROPOSED REDUCTION IN PAY - In December 1984, OMB notified the Smithsonian of a proposed five percent reduction in pay for Federal employees to take effect in FY 1986. Consequently, a reduction of \$5,800,000 is reflected in the Institution's Salaries and Expenses request. Formal guidelines covering implementation of this pay reduction are being developed by OMB.

RESTORATION OF TWO PERCENT REDUCTION - The two percent across-the-board reduction made to the Interior and Related Agencies Appropriations Act of FY 1985 (Public Law 98-473) is having a detrimental effect on virtually all Smithsonian programs. In general, the effect in FY 1985 of this reduction in the Salaries and Expenses account is to cause deferrals of planned programs. The continuation of this reduction into FY 1986 would cause serious and permanent disruption to previously budgeted programs. For FY 1986, a sum of \$3.301 million is sought to restore to each line-item in the Salaries and Expenses appropriation the funding eliminated by the FY 1985 two percent across-the-board reduction.

Necessitated by the two percent reduction, the Institution has taken a comprehensive survey of FY 1985 deferrals planned by each organization unit. The survey shows that programs in all functional areas of responsibility will be curtailed, including research, collections management, exhibitions, security and plant maintenance. For example, some organizations are postponing purchases of scientific equipment essential to effective research; deferring the publication of research results and of exhibit catalogues; cancelling scheduled exhibitions or reducing their scope; and slowing progress in automation and in collections management programs. Moreover, the two percent assessment against the Utilities Account amounts to \$273,000 of the total FY 1985 projected utilities deficit of \$1.1 million.

It is important to note that since salaries and benefits comprise a total of 67.4 percent of the Salaries and Expenses appropriation and utilities and rent costs amount to an additional 9.3 percent, only 23.3 percent or \$39 million remains for essential

supplies and materials, scientific, conservation and collections storage equipment, exhibition materials and publications. Against the "other objects" base of \$39 million, the \$3.3 million "two percent reduction," in effect, becomes an 8.5 percent cut. Significantly, the Smithsonian does not have substantial equipment or other non-personnel program funds that can be used to offset an across-the-board assessment.

Compounding this reduction, several Smithsonian bureaus are still recovering from the four percent across-the-board reduction effected in FY 1982, most notably the Institution's support organizations, the Office of Protection Services and the Office of Plant Services. Funds are being sought in the FY 1986 budget request to compensate, finally, for these base deficiencies. Up until now, the Institution has been compelled to reprogram monies from several organizational units to cover the actual cost of these essential activities.

In conclusion, the addition of \$3.301 million in FY 1986 is essential to enable the Institution to carry out its planned and approved budget programs and to avoid permanent disruption to research, collections management, exhibitions, security and plant maintenance activities.

Salary and Related Costs  
FY 1986

(Dollars in Thousands)

<u>Unit</u>	<u>Within- grade Increases</u>	<u>Annuali- zation of Pay Raises</u>	<u>One Additional Work Day</u>	<u>TOTAL</u>
Assistant Secretary for Science.....	6	6	2	14
National Museum of Natural History/Museum of Man..	312	153	63	528
Smithsonian Astrophysical Observatory.....	59	47	18	124
Smithsonian Tropical Research Institute.....	65	31	9	105
Smithsonian Environmental Research Center.....	42	23	9	74
National Air and Space Museum.....	131	54	24	209
National Zoological Park.....	162	99	35	296
Assistant Secretary for History and Art.....	6	5	2	13
National Museum of American History.....	170	86	33	289
National Museum of American Art.....	59	32	13	104
National Portrait Gallery.....	56	22	8	86
Hirshhorn Museum and Sculpture Garden.....	44	19	8	71
Center for Asian Art.....	24	10	4	38
Archives of American Art.....	6	6	2	14
Cooper-Hewitt Museum.....	15	14	3	32
National Museum of African Art.....	22	10	3	35
Anacostia Neighborhood Museum.....	11	6	2	19
Assistant Secretary for Public Service.....	12	9	4	25
Smithsonian Institution Press.....	21	9	3	33
Assistant Secretary for Museum Programs.....	16	6	2	24
Office of the Registrar.....	1	1	0	2
Conservation Analytical Laboratory.....	24	11	5	40
Smithsonian Institution Libraries.....	70	23	10	103
Office of Exhibits Central.....	23	12	5	40
Smithsonian Traveling Exhibition Service.....	7	2	1	10
Smithsonian Archives.....	11	4	2	17
National Museum Act.....	1	1	0	2
Directorate of International Activities.....	1	3	1	5
American Studies and Folklife Programs.....	12	3	1	16
International Environmental Science Program.....	4	2	1	7
Academic and Educational Programs.....	13	6	2	21
Collections Management/Inventory Program.....	3	6	2	11
Museum Support Center.....	12	6	4	22
Administration.....	151	82	31	264
Office of Design and Construction.....	18	14	6	38
Office of Protection Services.....	266	133	50	449
Office of Plant Services.....	199	116	45	360
<b>Total</b>	<b>\$ 2,055</b>	<b>\$ 1,072</b>	<b>\$ 413</b>	<b>\$ 3,540</b>



OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	11	524	1	28	-	38	-	117	4	329
FY 1985 Base	15	577	2	150	-	21	-	130	4	383
FY 1986 Estimate	15	606	1	107	-	1	-	130	4	305

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	15	0	15
11 Personnel Compensation.....	424	17	441
12 Personnel Benefits.....	56	1	57
21 Travel.....	25	3	28
23 Rent, Communications & Utilities....	12	-	12
24 Printing & Reproduction.....	1	-	1
25 Other Services.....	48	3	51
26 Supplies & Materials.....	10	-	10
31 Equipment.....	1	5	6
Total	<u>577</u>	<u>29</u>	<u>606</u>

Analysis of Increase

Necessary Pay.....	14
Inflation.....	4
Restoration of FY 1985 2% Reduction....	11

ABSTRACT - The Office of the Assistant Secretary for Science provides guidance, planning and overall policy direction for the Institution's scientific research efforts and for the science-related education and exhibition activities. Included in this line item is the Smithsonian Office of Educational Research (SOER), which is devoted to conducting basic and applied research in the field of informal learning. No program increase is requested for FY 1986. Necessary pay of \$14,000 is required for existing staff and an amount of \$4,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$11,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - I. Immediate Office, Assistant Secretary for Science: With base resources of 10 workyears and \$397,000, the Assistant Secretary for Science serves as the

principal advisor to the Secretary for the coordination and planning of Smithsonian science activities. The activities reporting to the Assistant Secretary for Science are the National Museum of Natural History/Museum of Man; the Astrophysical Observatory; the Tropical Research Institute; the Environmental Research Center; the National Air and Space Museum; the National Zoological Park; the Office of Fellowships and Grants; the Office of Educational Research; and the International Environmental Science Program. This Office administers and supervises a number of trust-funded programs designed to advance institutional objectives in science. The Office of the Assistant Secretary for Science also serves as the Smithsonian liaison to prominent national and international science organizations and participates in many national and international boards and commissions.

Continuing attention will be paid, over the next several years, to refining and developing new mechanisms to ensure the quality of the scientific activities in progress and of those still in the planning stage. Increasing attention and oversight will be given to the development of master plans to guide future facilities requirements at several science bureaus. In addition, strategies will be pursued to improve the quality of science-related educational activities and programs serving the public.

II. Office of Educational Research: With base resources of 5 workyears and \$180,000, this Office researches the process by which people learn outside the formal learning environment. Such findings are then applied to the enhancement of learning situations in such nonschool environments as museums, nature centers, zoos, and the home.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by annual allotments and are used primarily to support three significant international foundations which operate field research stations used by Smithsonian staff members, as well as by the world scientific community. The Seychelles Island Foundation operates the former Royal Society station on the island of Aldabra, located in the Indian Ocean, where biological research is conducted (estimated expenditures of \$15,000 in FY 1985 and in FY 1986). Support is continuing in FY 1985 and FY 1986 for the Charles Darwin Foundation which operates a biological research station in the Galapagos Islands (estimated expenditures of \$30,000 in FY 1985 and in FY 1986). The King Mahendra Trust for Nature Conservation operates a field station in the terai region (a lowland, grassy plain) of Nepal where significant ecosystem research is under way, providing scholars with a unique environment on the Indian subcontinent for further investigation (estimated expenditures of \$10,000 in FY 1985 and in FY 1986). Smithsonian support facilitates the continued accessibility of these areas for the research community at large. Support also is provided for the exchange of scholars and scientific information between the Smithsonian and a number of nations, principally, the People's Republic of China and Cuba (estimated expenditures of \$26,000 in FY 1985 and \$21,000 in FY 1986). In addition, funds are provided to the Office of Educational Research by an allotment to support a work-learn program which attracts talented undergraduate and beginning graduate students in education and psychology from across the country. These funds also are used to develop and support an educational seminar program to bring distinguished researchers and scholars with expertise in informal learning to the Washington metropolitan area in order to increase the visibility of informal educational research and enhance communication links among professionals of this field (estimated expenditures of \$48,000 in FY 1985).

Restricted Funds - These consist of restricted endowments, gifts and grants from individuals, foundations and corporations which specify the use of the donation or bequest. Contributions from various sources provide for continuing support of conservation and science in the Galapagos Islands (estimated expenditures of \$50,000 in FY 1985 and in FY 1986). Competitive awards are made to Smithsonian units from the Seidell

Endowment Fund, administered by this Office, which provides for dissemination of scientific information (estimated expenditures of \$75,000 in FY 1985 and in FY 1986). The FY 1984 awards from the Seidell Endowment are reflected in the expenditures of the organization receiving the funds.

Federal Grants and Contracts - Contract funds have been provided by the Office of Naval Research for the continuation of studies in the area of manpower research and development (estimated expenditures of \$238,000 in FY 1985 and \$225,000 in FY 1986). A grant from the National Science Foundation has been received by the Office of Educational Research to develop a model effort in community-based science education (estimated expenditures of \$67,000 in FY 1985).

NATIONAL MUSEUM OF NATURAL HISTORY/MUSEUM OF MAN

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**		Amount	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	490	18,734	1	310	-	794	7	1,387	41	1,323
FY 1985 Base	510	20,543	-	47	-	240	6	1,884	42	2,546
FY 1986 Estimate	510	21,890	-	30	-	232	6	1,857	36	1,652

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	510	0	510
11 Personnel Compensation.....	15,009	476	15,485
12 Personnel Benefits.....	1,717	59	1,776
21 Travel.....	162	10	172
22 Transportation of Things.....	37	16	53
23 Rent, Communications & Utilities....	82	4	86
24 Printing & Reproduction.....	283	135	418
25 Other Services.....	2,090	132	2,222
26 Supplies & Materials.....	610	79	689
31 Equipment.....	553	436	989
Total	<u>20,543</u>	<u>1,347</u>	<u>21,890</u>

Analysis of Increase

Necessary Pay.....	528
Inflation.....	159
Restoration of FY 1985 2% Reduction....	410
Program Funds.....	250

ABSTRACT - The National Museum of Natural History/Museum of Man (NMNH/MOM) carries out basic research on the natural and physical sciences and on the origins and development of man. The collections of the Museum, comprising approximately 84 million specimens, are used by staff and visiting scientists, and are carefully managed for the use of future scholars. The Museum's exhibits were viewed by six million visitors in 1984 and the Museum's education program serves these visitors, as well as many special groups, such as young people, the aged and the disabled. For FY 1986, an increase of \$250,000 is sought to further the Museum's long-term program of upgrading and replacing scientific laboratory and field equipment. Necessary pay of \$528,000 is required for existing staff and an amount of \$159,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$410,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The National Museum of Natural History/Museum of Man (NMNH/MOM), celebrating its 75th year in the Natural History Building in 1985, houses one of the world's largest and most valuable scientific collections, comprising approximately 84 million specimens of plants, animals, rocks and minerals, fossils, and man's cultural artifacts. This encyclopedic collection is an essential resource for the Nation's scientific enterprise, providing fundamental documentation for the study of man and the systematic investigation of the flora, fauna and geology of our planet, and some of the mysteries of outer space. The size of the collection has increased significantly every year since the Museum opened its doors in 1910. In 1984, almost one million specimens were added through gifts, purchases, expeditions of Museum scientists, and deposits from other government agencies. The Museum is responsible by law, 20 U.S.C. 59, to serve as the ultimate repository for desirable collections of natural history, archeology and ethnology gathered by U.S. Government agencies. From its earliest days, the Museum has sought and continues to stimulate research in connection with its own collections, and to promote the publications of its findings. In 1984, more than 3,000 scholars from throughout the world visited the Museum to make use of the collection, and more than 286,665 specimens were loaned out to the world scientific community. The Museum's own staff of 115 scientists continues the distinguished tradition of exploration, basic research, and extensive publication that is the Smithsonian hallmark. As the Museum's irreplaceable collection ages, an increasing amount of attention is being given to managing and conserving it so that it will be as useful 75 years from now as it is today.

Illustrative of one way the program works in practice is a multi-national expedition--co-sponsored in 1984 and 1985 by the Smithsonian--on Cerro de la Neblina, the largest and most scientifically interesting of the isolated sheersided mesas, known as tepuis, in Venezuela's "Lost World" region. Museum biologists flown by helicopter to Neblina collected tens of thousands of plants, birds, reptiles, insects and other invertebrate animals--many of them unusual species found nowhere else in the world. Deposited at the Museum, the collections are being studied by scientists from throughout the world as well as by those in the Museum, yielding data that, when published in scientific journals, will have an important bearing on unraveling the biogeographic and biological mysteries of the "Lost World." The excitement and scientific value of the expedition ultimately will be shared with the public through films, lectures, popular articles and possibly exhibits. Preserved at the Museum, the collections will have a long and useful life.

In recent years the Museum has increased considerably its public outreach programs. In 1984 public attendance reached six million, a new record. Five spectacular special exhibitions of scientific and cultural interest were showcased. In conjunction with these exhibitions--and the research of museum scientists--the Museum's education staff organized a variety of free natural history and cultural films and lectures aimed at providing a better understanding of scientific and human culture.

Research - The Museum's scientific staff is engaged in hundreds of field and laboratory projects, ranging from fundamental taxonomic and descriptive to broad-based ecological and evolutionary studies, aimed at exploring and providing a better understanding of the natural world and the cultures of man.

Much of this work is collection-related. For example: pathologic features were recognized in 300 specimens in NMNH's human skeletal collections for the first time in a recent inventory of the collections. This material is now under study by a museum physical anthropologist and is expected to yield historical data that will enrich medical knowledge of the genesis of skeletal disease and its relationship to environmental and cultural factors--both of which remain important in the treatment of disease today.

Data amassed in the Museum for collection-based research programs often proves invaluable to scientists at universities and other outside institutions. The Museum's Marine Mammal Salvage Program, designed to recover data and specimens of marine mammals stranded on the U.S. Atlantic Coast which otherwise would be lost to science, has been in operation since 1972 and has yielded significant data bearing on migratory patterns, size of populations, and eating and breeding habits. After studying the Museum's computerized statistics and specimens, as well as geomagnetic and coastline data, a team of U.S. agency and university scientists in 1984 suggested an answer to a longstanding scientific enigma: Why do live whales, dolphins and other marine mammals strand themselves on beaches? They theorized that the animals have a sensitive magnetic sense that enables them to navigate ocean "highways" marked by magnetic lane markers in buried rocks and that this sometimes can lead them to their death when they encounter coastal magnetic anomalies. If correct, the findings may eventually enable scientists to predict whale migration routes and locate the animals at sea.

The Museum's collection-based research also enables it to provide important assistance to the international scientific establishment. For example: erosion on the Nile Delta has increased alarmingly since the construction of the high Aswan Dam, opening up the possibility, if it continues, of dire consequences for Egyptian agriculture production and fisheries and for the operation of the Suez Canal. In 1984, a Museum oceanographer, in cooperation with the Egyptian Coastal Protection Institute, began taking soil borings near the Lake Manzeleh area which will serve as a basis to measure past coastal change and help assess changes likely to occur in the forthcoming years.

Every year scientists at the Museum produce nearly 500 books, scientific papers and articles. Recent publications include a centennial volume assembled by Museum volcanologists on the 1883 eruption of Krakatau volcano in Indonesia, the most comprehensive account ever compiled of this historic event, its consequences and continuing scientific significance; "Arctic," the sixth volume of the 20-volume Handbook of North American Indians, a set of books being used widely by the lay public as well as by professional scientists to understand Native Americans; and a comprehensive, three-volume work that is the first modern and complete treatise of the grasses of southeastern Brazil, important to Latin American institutions concerned with agricultural development. Scheduled for publication in 1985 is a field guide to the ferns of the U.S. and Canada that will be the first complete guide of its kind in North America. Treating over 400 species, many of which are illustrated by color photographs, the guide is expected to be an invaluable aid to scientists, horticulturists and amateur botanists.

In FY 1985, funding was provided for two important research projects: Caribbean Coral Reef Ecosystems under Stress (\$175,000) and Global Volcanism (\$175,000). The Coral Reef Project will expand the Museum's comprehensive survey of the barrier reef ecosystems at Carrie Bow Cay, Belize, to include other Caribbean sites. The principal research objective in the first year of the Global Volcanism Project is to add technical and chemical information to the Museum's existing global volcanism data banks. New publications are being developed and archival resources updated to make possible video disc retrieval of volcanological maps and photographs. These projects enhance ongoing research of the Museum and of other U.S. Government agencies conducting related studies. Congressional language providing for these projects stated that one-time start-up costs should not be reflected in future budgets. However, the original budgets were intended as base levels required to sustain the research for several years, and it is important to both programs that the current level of funding be maintained. Not only are there different equipment requirements each year, but as the programs get under way there are increased funding needs in such other categories as contractual services, supplies and travel. New staff brought on during FY 1985 will require equipment and supplies not known at the time the FY 1985 budget was prepared.

In FY 1985, equipment funds in the Caribbean Coral Reef Ecosystem Program will be used primarily to improve the base site at Carrie Bow Cay, Belize. A new seawater system will be installed and diving and boating equipment will be purchased. FY 1986 expenditures will emphasize lab instrumentation such as balances and microscopes, and will include a full year of research grants to Museum scientists and associates for coral reef studies in the Caribbean. In FY 1985, grants were available for only six months.

The first year of the Global Volcanism Program has been devoted to shifting the main volcanological data banks to more accessible and manageable form and installation of a Local Area Network so that the information can be accessed directly from the Institution's mainframe by microcomputers. The purchase of video disc equipment has been deferred for at least one year, as the high resolution equipment desired for this project is not currently compatible with low-cost, home-consumer equipment that will give broad distribution to research results. There will be an ongoing need for high-tech improvements in equipment, such as a high-quality x-y plotter and digitizer to add graphics capabilities to the microcomputer network.

Collections Management - The Museum has one of the largest and most valuable natural history collections in the world, and remarkable new acquisitions made every year continue to add to its importance. In 1984, the Museum purchased one of the premier collections of New World tropical butterflies. With more than 100,000 specimens, including many rarities and new species and subspecies, its scientific value is inestimable. Another unique research collection, being acquired in 1985, consists of 5,000 specimens of Dominican amber containing 30-million year old fossil insects. The rarity, numbers, quality of preservation, and diversity of the New World fossil insect fauna trapped and preserved in these specimens of fossil resin is unmatched in any Museum or private collection in the world. Its study will provide many new insights into insect evolution. Integrating this material--along with the more than 950,000 other specimens in 1984--into the main body of the Museum collections will be the task of the Museum's collections management staff.

Management and conservation of the collections has been facilitated and improved by the inventory of the Museum holdings and the pending move of major portions of the collection to the Museum Support Center (MSC). Teams of people are working in each of the Museum's seven scientific departments to document materials for the move, to reconcile move records with the inventory records, and to clean and prepare specimens for the relocation. A fuller description of the Museum's inventory efforts is included in the Collections Management/Inventory Program section of this budget request. A new collections management policy has been adopted, and complementary policies--with strict controls--have been established in each of the departments. This new policy will ensure maintenance of high standards in collections management for the future. Serious deficiencies in collections storage equipment on the Mall has begun to be addressed by significant purchases of storage cabinets for the entomology and botany departments.

Outreach - With the opening of the new Thomas M. Evans Gallery in 1981 it became possible for the Museum to host major special exhibitions focusing on science and man's cultures--some of them organized from the Museum's own collections. Among the important 1983 and 1984 gallery shows were "Precious Legacy," an exhibition of one of the largest and most significant Judaic collections in the world, and "Treasures from the Shanghai Museum: 6,000 Years of Chinese Art," the most comprehensive major Chinese art exhibition ever to tour the United States. Both of these exhibitions drew large crowds contributing to the Museum's new record attendance in 1984 of over 6 million persons. Of special significance in 1984 was "Exploring Microspace," an exhibition organized by the Museum that traced the evolution of the microscope, from the 17th century to the electronic age, displaying video and photomural images of the unseen microscopic world taken by Museum researchers on a Scanning Electron

Microscope (SEM). Live demonstrations of a SEM and a state-of-the-art optical microscope, plugged into TV monitors, made it possible for the public to see science in action. The exhibition is now on a two-year Smithsonian Institution Traveling Exhibition Service tour of Museums throughout the United States. This exhibition drew more press review from around the Nation than any other show previously staged by the Museum. In FY 1985, Congress approved a reallocation of \$200,000 from the Major Exhibition Program to the Museum for the Evans Gallery. This provides a base of \$300,000 for special exhibitions to allow long-range development for future Evans Gallery exhibits; to underwrite a portion of the costs for development, research, design, and production of exhibits already planned; to install exhibitions produced by other museums, governments, and cultural organizations; and to use as seed money to develop exhibits to the point where the Museum can attract private sector contributions.

Over the past five years the Museum has had under way a sweeping reorganization and redesign of its old hall of fossils and has opened a scientifically up-to-date and lively new dinosaur gallery and several other parts of a large and extremely popular new exhibition complex titled "Fossils: The History of Life." In FY 1985 and FY 1986, the Museum will complete this project. The first of the final four highlights to open will be "Mammals in the Spotlight" which dramatically depicts what happened after the extinction of dinosaurs when mammals began a rapid evolution in size and diversity that enabled them to succeed reptiles as the dominant vertebrates on land.

To celebrate its 75th anniversary in the Natural History Building, the Museum will open in November 1985, "Men of Greatness: Feats of Daring," a year-long, major exhibition on the U.S. Exploring Expedition of 1838-1842. Circumnavigating the globe, this expedition led by Lieutenant Charles Wilkes mapped and surveyed the South Pacific and confirmed for the first time the existence of Antarctica as a continent--making the voyage a major landmark in the history of U.S. science and maritime history. The huge cargo brought back by the expedition formed the nucleus of the Smithsonian's scientific collections. After its closing in Washington, D.C., the exhibition will travel to major museums and historical societies across the United States. To supplement the exhibition, the Museum's Office of Education is planning a variety of related activities, including a symposium, scholarly and popular lectures, films, dance performances and an educational packet.

In addition to organizing related educational activities for Evans Gallery exhibitions, the Museum's Education Office--and its staff of about 300 volunteer docents--continues to be very successful in reaching a large number of visitors of all ages with a variety of tours and learning experiences. During the past year a new series of instructional charts on plant and animal identification was published. These posters will be useful in classrooms, clubs, nature centers, and many other educational settings, including the home. In 1985, the Office is planning a Natural Science Symposium for 400 Washington, D.C., area high school science students and their teachers. The program will feature outstanding guest speakers, seminar and discussion sessions, films, and tours behind the scenes to show the students current research in natural history, particularly Museum research based on collections.

#### EXPLANATION OF PROGRAM INCREASE:

Research Equipment Program (\$250,000) - For FY 1986, an increase of \$250,000 is requested to continue a long-term program of upgrading and replacing scientific laboratory and field equipment. The acquisition of up-to-date research equipment is an essential component of the Museum's scientific program and is crucial to the effective utilization of the scientific staff. Toward that end, an inventory of all research equipment has been reviewed to determine the replacement needs and associated costs for FY 1985 through FY 1989, to keep abreast of technological advances in



scientific research and to increase efficiency and productivity. This replacement plan is updated each year to include changes due to new technology, new scientific staff needs, and refinement of priorities. Between FY 1985 and FY 1989, the research equipment inventory has identified needs totaling \$3,478,000.

With a base increase appropriated in FY 1985, the Museum replaced a no longer functioning Scanning Electron Microscope (SEM) with a new higher resolution instrument. The SEM serves a large group of the Museum's biologists, geologists and anthropologists. The Museum also plans to purchase an image analyzer which will permit the automation identification and analysis of objects of similar shape by the reduction of video and photographic images to mathematical relationships and equations. In addition, many less expensive pieces of equipment will be replaced in FY 1985 as this program gets under way.

In FY 1986, the \$250,000 added to the FY 1985 increase of \$260,000 and existing base funds of \$150,000 for research equipment will allow the Museum to make significant progress in replacement plans. There are over 100 instruments planned for purchase in FY 1986, at an estimated cost of \$660,000. Following are examples:

- Several microscopes with different capabilities will be purchased at prices ranging from \$10,000 to \$30,000 each. One example is a scanning light microscope which provides great depth of field, allowing for sharp photographs at low magnification levels (10X to 20X) of thick objects such as corals, mollusks and crustaceans (\$20,000).

- A new vacuum-pump evaporator is required for preparation of samples for scanning electron microscopy (\$15,000).

- The Department of Mineral Sciences requires a fully automated XRF unit (\$125,000), an instrument used for analyzing rocks and minerals for major, minor and trace elements by exciting the elements with X-rays and measuring the secondary radiation given off by the sample. The lack of such an instrument is a weakness in the Department's analytical facilities, and two external review committees have recommended strongly the purchase of such an instrument.

- A leaf area meter is required by the Department of Botany (\$6,300). This instrument allows rapid optical measurement of the surface area of plants to determine the analytical and morphological features.

- Several cameras and various lenses and other attachments are required throughout the Museum for field and lab research (\$200 to \$9,500). One particularly expensive but important Pos-1 camera system is required to provide a complete range of graphic reproduction capabilities (for example, publishable quality illustrations of specimens). This equipment will be utilized by scientists and staff throughout the Museum.

- A new carbon analyzer (\$27,000) is required to replace an existing one that is now 18 years old. This instrument is used to analyze light, volatile elements (i.e. oxygen and carbon) which cannot be analyzed with the electron microprobe.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from a variety of sources including allotments, the Museum's share of net proceeds in the Museum shop, cafeterias and other receipts such as the sale of exhibit brochures, the "By-Word" communications system and tuition reimbursement grants from local universities. Program allotments provided support for the Wetmore research project (estimated expenditures of \$32,000 in FY 1985 and \$20,000 in FY 1986); for the

"Shanghai" exhibition in the Evans Hall Gallery (actual expenditures of \$206,000 in FY 1984); and events related to the opening of new exhibits. Special Purpose funds are used to help finance exhibit hall brochures, field research, audio-visual equipment for exhibit halls, training for anthropology students, research in paleontology, and provide support for the Anthropological Archives.

In addition, funds from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program, Research Opportunity Fund, Smithsonian Society, and the Special Exhibition Fund support research, education and exhibition projects. In FY 1984, the total funding from these programs amounted to nearly \$600,000, providing various levels of support for approximately 150 projects. This level of support is anticipated to continue in FY 1985 and in FY 1986. In FY 1985, the Special Exhibition Fund will provide in excess of one million dollars for support of the Aditi and Wilkes Exhibits. Expenditures under these programs have not been recorded for FY 1985 and FY 1986 which explains the variance in totals shown between FY 1984 and the subsequent two years.

Restricted Funds - These are in the form of restricted endowments which specify the use of the donation or bequest and of gifts and grants provided by individuals, foundations or corporations for specific purposes. Generally, the funds provide support for a particular exhibit or research project. Among the restricted funds are funds for field and laboratory research into the physical and physicochemical mechanisms underlying geologic and cosmologic processes (estimated expenditures of \$65,000 in FY 1985 and \$50,000 in FY 1986); and studies of mangrove swamps (estimated expenditures of \$26,000 in FY 1985 and in FY 1986). Other funding is available for ethnological research among the Canela Indians of Brazil (estimated expenditures of \$38,000 in FY 1985 and \$41,000 in FY 1986); for improvement of the curation, conservation and storage of the Philippine ethnological collection (estimated expenditures of \$184,000 in FY 1985 and \$235,000 in FY 1986); for support of the marine mammal events program (estimated expenditures of \$20,000 in FY 1985 and \$21,000 in FY 1986); and for support of the graduate fellowships for marine systems research (estimated expenditures of \$35,000 in FY 1985 and in FY 1986). Gifts have been received for the purchase of gems and minerals (estimated expenditures of \$25,000 in FY 1985 and in FY 1986); and for upgrading the Gem and Mineral Hall (estimated expenditures of \$147,000 in FY 1986). The Museum has received funds for a live exhibit depicting the marine life of the Maine Coast, in a manner similar to the present Coral Reef exhibit (estimated expenditures of \$31,000 in FY 1985); and for the "Man Makes Culture Makes Man" exhibit (estimated expenditures of \$30,000 in FY 1985). Funds also have been received toward production of the "Views of a Vanishing Frontier" exhibit (estimated expenditures of \$45,000 in FY 1985) and the "Men of Greatness, Feats of Daring" exhibit which will feature materials gathered by the Wilkes Expedition (estimated expenditures of \$242,000 in FY 1985). The Museum continues to seek support from private sources for its planned exhibits. Currently, funds are being sought for two temporary shows, "The Nature Paintings of Robert Bateman" and "Ebla to Damascus" to be installed in the Evans Hall Gallery (estimated expenditures of \$100,000 in FY 1986).

In FY 1982, the Museum undertook the management of the Smithsonian Marine Station in Link Port, Florida (formerly called the Fort Pierce Bureau), as an integral part of its marine research program. The Hunterdon Endowment is used to support oceanographic research at this facility, located on the central east coast of Florida, a transitional zone offering an unrivaled opportunity for study of a unique complex of both temperate and tropical plants and animals. Research here focuses on the life history, systematics and ecology of a wide spectrum of marine life. Contributing to the research efforts are a resident scientist, Smithsonian visiting scientists, post-doctoral fellows and numerous national and international visiting investigators (estimated expenditures of \$427,000 in FY 1985 and \$448,000 in FY 1986). Support also is provided by the Seward Johnson Endowment Fund for operation and maintenance of the Johnson-Sea-Link submersible program conducted at the

facility by the Harbor Branch Foundation (estimated expenditures of \$471,000 in FY 1985 and \$500,000 in FY 1986).

The Museum also has several other restricted funds, each with anticipated expenditures of less than \$20,000 a year.

Federal Grants and Contracts - These funds are provided by various agencies and departments for special projects which can be conducted at the Museum because of its scientific expertise. Examples of Federal contract support are: an Agency for International Development grant for the study of aquaculture farming in the Caribbean (estimated expenditures of \$407,000 in FY 1985 and \$403,000 in FY 1986); the Systematics of Aedes Mosquitoes Project funded by the United States Army to conduct basic biosystematic research on mosquitoes that are of medical significance overseas (estimated expenditures of \$91,000 in FY 1985 and in FY 1986); another project funded by the United States Army to create a computer data file on the medical importance, distribution, ecology and collection of mosquitoes (estimated expenditures of \$65,000 in FY 1985 and \$69,000 in FY 1986); the "Tumor Registry in Lower Animals" project funded by the National Cancer Institute that facilitates the study of neoplasia and related disorders in invertebrate and cold-blooded vertebrate animals important in human biomedical research (estimated expenditures of \$370,000 in FY 1985 and \$439,000 in FY 1986); a project funded by the National Science Foundation to allow the Smithsonian Oceanographic Sorting Center to increase knowledge of polar ecosystems by studying extant collections of flora and fauna (estimated expenditures of \$100,000 in FY 1985 and in FY 1986); to process and distribute polar biological specimens and data (estimated expenditures of \$226,000 in FY 1985 and \$262,000 in FY 1986); and funds to curate material collected during the Bureau of Land Management's outer continental shelf biological sampling program in the Atlantic and Gulf regions (estimated expenditures of \$220,000 in FY 1985 and \$230,000 in FY 1986). The Museum also is seeking funds for various research projects (estimated expenditures of \$1,015,000 in FY 1985 and \$56,000 in FY 1986).

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	86	7,441	43	2,244	2	646	1	222	101	12,188
FY 1985 Base	83	8,514	43	2,271	2	468	1	198	99	12,424
FY 1986 Estimate	83	8,966	43	2,294	2	509	1	156	102	12,606

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	83	0	83
11 Personnel Compensation.....	4,264	110	4,374
12 Personnel Benefits.....	449	14	463
21 Travel.....	107	5	112
22 Transportation of Things.....	39	2	41
23 Rent, Communications & Utilities....	395	16	411
24 Printing & Reproduction.....	54	2	56
25 Other Services.....	1,431	180	1,611
26 Supplies & Materials.....	250	60	310
31 Equipment.....	1,525	63	1,588
Total	<u>8,514</u>	<u>452</u>	<u>8,966</u>

Analysis of Increase

Necessary Pay.....	124
Inflation.....	157
Restoration of FY 1985 2% Reduction....	171

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO), located in Cambridge, Massachusetts, is engaged in basic astrophysical research in the following interrelated fields: atomic and molecular physics, high energy astrophysics, optical and infrared astronomy, planetary sciences, radio astronomy and geoastronomy, solar and stellar physics, and theoretical astrophysics. SAO cooperates in its scientific programs with the Harvard College Observatory (HCO), and together the two observatories form the Center for Astrophysics (CfA). SAO also operates the Fred Lawrence Whipple Observatory (FLWO) on Mt. Hopkins, Arizona, the site of the Multiple Mirror Telescope (MMT), a joint project with the University of Arizona.

Scientific data are obtained from laboratory experiments conducted in Cambridge; telescopic observations, especially at FLWO on Mt. Hopkins near Tucson, Arizona; and

space observations utilizing satellites, rockets and balloons. The reduction and analysis of these data are performed mostly with SAO's computer systems in Cambridge. The resulting astrophysical information and scientific interpretations are published in scientific journals and reports. These results also are conveyed to the scientific community and to the public through lectures and more general articles and books.

No program increase is requested for FY 1986. Necessary pay of \$124,000 is required for existing staff and an amount of \$157,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$171,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - Founded in 1890 by the third Secretary of the Institution, Samuel Pierpont Langley, SAO has become a leading international center for astrophysics. Past achievements include Langley's own pioneering studies of solar-terrestrial relationships; the establishment of a worldwide satellite tracking network at the dawn of the Space Age; the development of the Multiple Mirror Telescope; and the landmark survey of galactic redshifts.

The Observatory's current leadership in astrophysics is based in part on its diversified approach to research, including the varied interests of the staff and its technological capabilities to create new research tools. Although the research programs are divided among seven divisions, efforts are integrated so that the results in one division often complement those in another.

Because of its location outside the Washington metropolitan area, SAO has several administrative support units funded by Federal funds and by indirect charges to grants and contracts. In addition, SAO maintains an engineering department, a computer facility, and an extensive astronomical library.

SAO's basic astrophysical research concentrates on seven interrelated fields. The major accomplishments of SAO are recorded in the results published in scientific journals by individual staff members. Approximately 200 such papers appear each year. A brief summary of the research conducted in these seven fields include:

Atomic and Molecular Physics - Most techniques for interpreting observations of astronomical objects require quantitative information about atomic and molecular processes. Accurate determination of physical conditions in these objects depends directly upon the precision and completeness of the underlying atomic and molecular data. The major objective of this research is to obtain such data from combinations of laboratory and theoretical studies.

Laboratory experiments using a laser light source in combination with an apparatus to form well-defined beams of neutral molecules have been carried out to measure the basic absorption processes of hydroxyl (the hydrogen-oxygen ion formed from water) and other ions. These measurements are important for the study of comets whose chemical components provide clues to the origin of the solar system.

High Energy Astrophysics - Research in high energy astrophysics is concentrated on those astronomical objects that emit a substantial fraction of their energy in X-rays. Since X-rays are absorbed by Earth's atmosphere, observations must be made from balloons, rockets, the Space Shuttle, or satellites. SAO scientists and engineers are developing new instrumentation to carry out future space science missions. Scientific studies are directed at a broad range of topics including the processes involved in generating radiation observed in the X-ray band, the amount of matter in the universe, and the origin, development, and ultimate fate of the universe.

Scientists are completing construction of a high-resolution X-ray imaging detector for the Roentgen Satellite (ROSAT) to be launched by the Federal Republic of Germany. They also are designing a novel X-ray telescope to be launched by the National Aeronautics and Space Administration (NASA) in a rocket, and are developing new detectors and other instruments that may be used in NASA's planned Advanced X-ray Astrophysics Facility.

Optical and Infrared Astronomy - Research in optical and infrared astronomy concentrates on extragalactic and galactic astronomy, with special emphasis on studies of clusters of galaxies, clusters of stars, and the formation and evolution of stars. In support of this and other research, SAO operates the Fred Lawrence Whipple Observatory on Mt. Hopkins, Arizona, the site of the Multiple Mirror Telescope.

A survey of galaxies completed at SAO has proven to be a major contribution to observational cosmology. For example, it has shown that galaxies congregate in clusters, sheets, and strings, surrounding large voids. The survey is now being expanded to cover more of the southern skies and to extend deeper into space. The results will allow the best determinations now possible of the large-scale distribution of matter in the universe.

Work to improve the optical finish of the MMT mirrors is continuing so that greater advantage can be taken of the excellent image quality allowed by the unusually steady atmosphere at the summit of Mt. Hopkins.

Following a worldwide competition, an SAO scientist was chosen by NASA to be one of the three principal investigators for the development of infrared instruments to be carried into space in the 1990s.

Planetary Sciences - Research in planetary sciences examines the planets, satellites, and small bodies of the solar system to discover the events and processes that created them from gas and dust billions of years ago. Optical observations are performed at Oak Ridge Observatory in Massachusetts in support of this research.

Preparations have been completed for measuring the sky positions of Halley's Comet at SAO's Oak Ridge Observatory as the Comet becomes bright enough to observe well. These positional data will be essential to proper pointing of instruments aboard the European-built Giotto spacecraft which will pass close to this famous Comet early in 1986.

Radio Astronomy and Geoastronomy - Research in radio astronomy concentrates on understanding the structure, evolution, sources of energy, and ultimate fate of radio-wave-emitting astronomical objects distributed throughout the universe. SAO scientists also are pioneering the use of radio astronomy techniques to measure the contemporary drifts among the continents. Other research involves development of atomic clocks, tests of the theory of general relativity, and formulation of uses for long tethers in space.

The first indications have been obtained by SAO scientists that at least some of the Earth's continents are moving at the same rates now as they were several million years ago. SAO scientists also are developing and about to test a new atomic clock, cooled to nearly absolute zero, that may keep time nearly one thousand times better than any clock now available; if the development is successful, such a clock would lose track of time at a rate of about one-tenth of a second every billion years.

Solar and Stellar Physics - Research activities in solar and stellar physics are directed principally toward understanding the physical processes in the sun and stars. Stars, like the sun, are studied in order to increase understanding of the dependence of their properties on age, on composition, and on their physical associations in pairs and in groups.

Ultraviolet observations carried out with the International Ultraviolet Explorer (IUE) satellite encompass 12 different programs conducted by SAO. These observations of the chromospherically active star, Lambda Andromedae, revealed the first ultraviolet flare ever recorded on a giant star, and perhaps the most energetic stellar flare yet observed.

Theoretical Astrophysics - Theoretical astrophysics utilizes physical analysis and mathematical modeling to understand astronomical systems. A broad range of topics are investigated, including the interiors of neutron stars, the properties of atoms and molecules in interstellar space, the formation of spiral structure in galaxies, high temperature plasmas, and the formation of planets in the early solar system.

One of the more intriguing theoretical studies has been a somewhat unorthodox investigation into conditions necessary for life elsewhere in the universe. General theoretical considerations and plausible assumptions--such as the ambient temperature required for life--may be used to determine, within factors of 10 to 100, the lengths of the day and the year on habitable planets. These timescales may be expressed in terms of fundamental physical and astronomical constants, and their universality may have important implications for the existence of extra-terrestrial life.

Equipment Replacement - With funding of \$820,000 provided in FY 1984, SAO began a program to replace and improve its badly outmoded laboratory equipment. This program will strengthen greatly each of the experimental research efforts carried out by SAO's scientists. In FY 1985, with funding of \$800,000, SAO initiated a similar program to replace and improve computing equipment used to analyze the data gathered by a variety of telescopes on the ground and in space and continued the laboratory equipment replacement program at a level of \$620,000. Both programs will continue in FY 1986 and in subsequent years.

Education - SAO is embarking on a project to help improve the teaching of science and mathematics to pre-college students by developing educational materials and curricula to engage student interest through taking advantage of the fascination of young persons with astronomy. There also are ongoing programs to make the scientific work of SAO available to the public via open nights at the observatory in Cambridge; guided tours of the Whipple Observatory in Arizona; popular lecture series in Washington, D.C. and Boston; and the production of an astronomical slide set for sale at cost to planetaria, schools, and amateur astronomers.

Submillimeter Telescope Array - The Astronomy Survey Committee of the National Academy of Sciences and the Astronomy Advisory Committee of the National Science Foundation have strongly recommended the development of groundbased submillimeter-wavelength telescopes, and two such single-aperture United States telescopes are now in the process of construction. The next logical step in the development of submillimeter astronomy is a small array of telescopes operating as an interferometer. Such an array could achieve better than one arcsecond resolution, more than one order-of-magnitude improvement over single telescopes. No other instrument, operating or planned, could achieve this resolution at submillimeter wavelengths. This telescope array could serve as the prototype for any future national facility in this wavelength range, just as the development of the MMT was the prototype for the next generation of giant optical telescopes. In FY 1984, SAO completed a year-long study that developed a plan to construct a submillimeter telescope array and identified two possible sites for the facility. During FY 1985 and following years, SAO plans to continue the design and preliminary instrument development of the submillimeter telescope array.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Unrestricted general funds come primarily from overhead charged on contracts and grants. These funds are used to support

administrative positions and other administrative costs of SAO. Special Purpose funds come primarily from two sources: external users of SAO's Computer Center and the Institution's Trust funds. The former may be used for research purposes and for computer related purchases in future years. The latter are grouped into various programs. By far the largest, the Fellowships and Visiting Scholars Program anticipates expenditures of \$310,000 in FY 1985 and \$350,000 in FY 1986. Research Opportunities funds are used for costs of small individual research grants. Finally, funds from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program are used mostly to support research projects; the corresponding expenditures for FY 1985 and FY 1986 have not yet been recorded, which explains the decrease in FY 1985 and FY 1986 relative to that shown for FY 1984.

Restricted Funds - Restricted funds consist of restricted endowments, gifts and grants from individuals, foundations, organizations or corporations which specify funds for a particular project. Restricted Endowment Funds provide support for studies in various physical sciences. A grant from the Chemical Manufacturers Association assists SAO in studies of the chemical balance of halogen in the ozone of the stratosphere (estimated expenditures of \$84,000 in FY 1985 and \$87,000 in FY 1986).

Federal Grants and Contracts - SAO receives a majority of its funding through Federal agency grants and contracts for research. These studies are integrated with both governmental and academic institutions in the United States and abroad. Funding is received from Federal agencies, such as NASA, the Naval Research Laboratory and the Air Force, to support specific projects in areas of SAO's expertise (expenditures of \$12,188,000 in FY 1984, estimated expenditures of \$12,424,000 in FY 1985 and \$12,606,000 in FY 1986).



SMITHSONIAN TROPICAL RESEARCH INSTITUTE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds			
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	88	3,424	2	103	-	413	-	264	-	4
FY 1985 Base	87	3,600	2	106	-	196	-	397	-	-
FY 1986 Estimate	87	3,960	2	111	-	203	-	225	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	87	0	87
11 Personnel Compensation.....	2,239	113	2,352
12 Personnel Benefits.....	504	12	516
21 Travel.....	72	7	79
22 Transportation of Things.....	15	-	15
23 Rent, Communications & Utilities....	29	-	29
24 Printing & Reproduction.....	36	3	39
25 Other Services.....	222	48	270
26 Supplies & Materials.....	327	15	342
31 Equipment.....	156	162	318
Total	<u>3,600</u>	<u>360</u>	<u>3,960</u>

Analysis of Increase

Necessary Pay.....	105
Inflation.....	34
Restoration of FY 1985 2% Reduction....	71
Program Funds.....	150

ABSTRACT - The Smithsonian Tropical Research Institute (STRI), located in the Republic of Panama, serves as an international center for studies in tropical biology, including both fundamental research in such fields as ecology, anthropology, behavior and evolution; and applied studies in such areas as agro-forestry and natural resource conservation. STRI has been designated the custodian of the Barro Colorado Island Nature Monument, a very large tropical nature preserve located in the Panama Canal, including the Island and five adjacent peninsulas in Gatun Lake. Other STRI facilities include a Pacific-side marine laboratory at Naos Island; an Atlantic-side marine laboratory at Galeta Point; a field station in the San Blas Islands on the Atlantic side; and research library, laboratories, conference and study facilities, and administrative headquarters

in Panama City. Research opportunities and training in tropical biology are provided to individuals from high school level to distinguished senior scholars. Other educational programs include visits to the Barro Colorado Island Nature Monument and the preparation of audio-visual and educational materials on conservation for distribution throughout the Isthmus of Panama. For FY 1986, an increase of \$150,000 is requested to move ahead with a replacement program for scientific instruments and equipment used in support of research. Necessary pay of \$105,000 is required for existing staff and an amount of \$34,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$71,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Smithsonian Tropical Research Institute is the Nation's leading international center for the advancement of basic research in tropical biology, carrying out fundamental research on the ecology, evolution and behavior of tropical plants and animals in Panama, and elsewhere in the tropics. These studies range from investigations of the evolution and behavior of marine and terrestrial organisms to the fluctuations and long-term changes in the tropical forest. The results of many of the projects undertaken will increase the understanding of basic scientific questions such as species diversity, how limited resources are divided, and what relationships and environmental interactions are important between tropical and temperate life forms. STRI also encourages its staff scientists to do comparative research in tropical biology at various locations in the old and new world tropics.

STRI has the responsibility to protect and manage the Barro Colorado Island Nature Monument, located in the Panama Canal. Smithsonian interest in Barro Colorado Island (BCI) began in 1923, when it participated as a member of the Institute for Research in Tropical America. In 1946, Congress approved the transfer of operations of the Canal Zone Biological Area (Barro Colorado Island) to the Smithsonian, and STRI was established. More recently, as part of the Panama Canal Treaty of 1979, STRI was designated as the custodian of the BCI Nature Monument, which includes the Island itself and the adjacent peninsulas in Gatun Lake. This designation assured the continued protection of this valuable natural and scientific resource, and also provided additional areas for research and conservation purposes.

STRI also maintains research sites and marine laboratories on both the Pacific and Atlantic Oceans. At the Pacific-side marine laboratory at Naos Island, a specially-designed seawater system is used for controlled experimentation on organisms from both oceans without risk of interoceanic contamination. Shallow water investigations such as the study of coral reefs are conducted at the marine laboratory at Galeta Point on the Atlantic side. A small field station in the San Blas Islands on the Atlantic side of the Isthmus also is available for coral reef studies, and STRI maintains a 63-foot vessel for other offshore studies. STRI's research library, containing more than 20,000 volumes on subjects related to tropical biology, is considered one of the best reference sources in the hemisphere for tropical studies.

A major responsibility of STRI is to provide the necessary logistic and scientific base for visiting investigators coming from the United States and abroad. The library, laboratories and residence facilities, along with the experience and knowledge of the STRI permanent staff, allow scientists from the temperate zone to work in the tropics and still maintain the kind of support to be found in a university atmosphere. Dissertations on a wide variety of subjects can be pursued in a biologically and intellectually flourishing environment.

Research Results - STRI's research staff includes 26 scientists and 26 research associates in tropical biology, anthropology and forest agronomy. Current research projects and published reports are summarized in an annual report, STRI Contributions to Research, which is distributed to interested institutions and agencies throughout Panama,

the United States and other countries. Recent projects undertaken by STRI's research staff include the following work:

STRI's most recent initiative is "Alternatives to Destruction," a multidisciplinary project to develop alternatives to the current system of clearing the forest for cattle ranching that has been prevalent in Central America. Conducted with the collaboration of several Panamanian agencies in an area adjacent to the Smithsonian's Barro Colorado Island Nature Monument, the program aims to develop ways by which peasant families can feed themselves without destroying the forest. Various projects under this study include the management and raising of indigenous animals in the forest, such as iguanas and pacas as potential protein sources, and forest gardening of nontraditional cash crops.

In addition to studying the current use of the forest, researchers at STRI also are interested in past use of the tropics. An archeological study in Central Panama is designed to determine the nature and longevity of human adaptations within a watershed. This study combines a series of disciplines and techniques: archeology, ethnography, bone chemistry, phytolith and pollen analysis, geomorphology and faunal studies.

A study of the prolonged El Niño Southern Oscillation (that profoundly altered the climate from Washington State to the African Continent) utilized extensive studies of the status and seasonal and annual growth rates of coral reefs to document and evaluate the El Niño's impact on these reefs.

The study of the Africanized "Killer Bee" not only established the basis for describing the effect of the invasion of this exotic insect upon native bees and pollinators, but also contributed to public awareness of the health, safety, and the economic menace posed by these insects. As a result of comprehensive public education programs and preparation of defense reactions, the arrival and dispersal of the bees throughout Panama has not produced marked public health problems or economic disturbance in the agricultural sector.

Publications - STRI staff members publish extensively--over 190 articles and reports were published during FY 1984. STRI scientists recently have summarized ten years of study of a single ten-hectare watershed on BCI. The results of this long-term detailed monitoring of the physical and biological parameters were published jointly by the Smithsonian and Oxford University Presses, "The Ecology of a Tropical Forest." Among the books that the STRI scientific community has or will have published in FY 1984-FY 1985 are: Corals and Coral Reefs of the Galapagos Islands; Communication and Non-communication by Cephalopods; and Technology, Ritual and the Labor Process.

Educational Programs - STRI staff members are invited frequently to lecture at universities and other institutions in the United States and in foreign countries. In FY 1984, STRI scientists and students participated in 22 major international scientific congresses as either invited speakers or delegates, as well as in numerous national congresses and symposia. STRI maintains close ties with international organizations involved in research and conservation in the tropics; members of the STRI staff, for example, are on the Board of the Organization for Tropical Studies and the Charles Darwin Foundation for the Galapagos Islands. In August 1983, STRI and the University of Panama hosted the IXth International Congress of Arachnology (the first Congress held outside of Europe). In addition, scientists and students from more than 175 institutions in the United States and 37 other countries utilized STRI's resources during FY 1984.

Approximately 100 young men and women representing a dozen nations participated in STRI academic programs in FY 1984. Educational efforts are devoted mostly to graduates and postgraduates although efforts are made to introduce undergraduates, and occasionally high school students, to tropical biology. In addition to an increased participation by Latin American students in STRI's short-term fellowship assistantship program, STRI was instrumental in organizing a six-week Tropical Ecology field course for students from the University of Panama. It was the first of its kind offered in Panama, and 13 biology students as well as a combination of STRI staff and University of Panama professors participated. The course was aimed at familiarizing students with the various aspects of tropical ecology, and preparing them to do their own research. STRI also hosted courses in Tropical Meteorology and Applied Oceanography given by a visiting scholar. These were attended by approximately 50 professionals from STRI and various Panamanian institutions.

#### EXPLANATION OF PROGRAM INCREASE:

Scientific Equipment Replacement (\$150,000) - For FY 1986, an increase of \$150,000 is requested to move ahead with a replacement program for scientific instruments and equipment used in support of research. In FY 1984, a detailed scientific equipment replacement survey was conducted at the five major research sites at STRI. In conjunction with the scientific equipment survey, a review of other equipment used in support of research was conducted. These surveys identified a replacement need amounting to \$443,000 over five years for scientific equipment; and a total of \$720,000 over five years for vehicle, boat, and outboard motor and general machine shop equipment replacement, and for the establishment of a preventive maintenance program for central air conditioning systems.

STRI's scientific staff are preeminent in their fields and have been consistently in the forefront of scientific investigation on the evolution, ecology and behavior of tropical plants and animals. To ensure the continuation of its achievements and to pursue new research initiatives, it is essential that existing scientific equipment be replaced or upgraded and new equipment be purchased to incorporate recent advances in technology. These technological advances would greatly reduce the time required to conduct innovative research in tropical biology. Moreover, the relatively isolated location of STRI combined with the harsh tropical climate require more frequent replacement of certain equipment and the need for back-up systems to insure continuous operation. Presently, STRI supports equipment replacement with a funding base of \$122,000. The \$150,000 being sought will provide a base of \$272,000 for the acquisition of new and the replacement of worn or outdated scientific and general machine shop equipment. Some examples of equipment that will be purchased include:

- an Omni-Total Station (\$32,000) for archeological and biological surveying projects. This laser-based system, which will replace conventional surveying instruments, enables the rapid surveying and construction of maps and grids for projects requiring precise designation of location, as is necessary in archeological excavations and forest mapping;
- two 32-bit computers (\$55,000), with 20 megabytes of memory, to increase STRI's capability to handle increased data sets being generated by such programs as the study plot on Barro Colorado Island with 250,000 marked trees and 15 years of data on fluctuation in the environment produced by STRI staff. These data sets are extremely difficult and time consuming to process on the existing minicomputer which, with the purchase of the new machines, could then be re-dedicated to word-processing and administrative functions;
- a 22-foot research/diving support boat (\$25,000) to replace a ten-year-old and unsafe 15 foot Boston Whaler. The only reasonably undisturbed sites for marine

research close to the Naos Laboratory are at Taboga and adjacent islands approximately ten miles from the pier at Naos Island. Especially during the dry season (December through April) when winds are strong and seas choppy, travel to these research sites is unsafe in a small boat with only a single engine such as STRI has at Naos at this time. In addition, it is not safe even in the calmest weather to carry more than three divers with full scuba gear, or more than two with heavy sampling equipment or specimens. Acquisition of a research boat will allow researchers to travel safely and reasonably quickly to Taboga, or even the Perlas Islands, under most weather conditions. Future programs also would benefit from the availability of a new diving boat, including cooperative research between the University of Panama and STRI on the general hydrography and water quality of Panama Bay;

- a number of basic items of equipment to support the research activities of the hundreds of investigators who conduct research on Barro Colorado Island (\$8,000). Necessary instruments include a dissecting scope (\$2,200); a mettler balance (\$2,300); and various kinds of laboratory supplies and instruments (\$3,500).
- an amount of \$30,000 to acquire and replace general machine shop/maintenance equipment. Over the years, STRI has obtained much of its maintenance equipment/tools through military surplus. This equipment in most cases is over eight years old and obsolete, making it difficult to obtain spare parts. In addition, because of the wide geographical distribution of STRI's research facilities, it is difficult to maintain equipment at a centralized shop. Duplicate maintenance equipment such as drill presses, bench grinders and table saws are needed at the various sites to expedite maintenance and repair of both scientific and support equipment such as seawater systems and outboard motors.
- STRI has a total motor vehicle fleet of 34 vehicles, which is the minimum level needed to enable the scientific staff and visiting researchers to conduct research as required at the different sites along the Panamanian Isthmus. At this time, approximately 50 percent of the motor vehicle fleet meets the minimum replacement standards. Most of the excess government vehicles owned by STRI are overaged and far exceed the mileage standards prescribed by the General Services Administration. These vehicles constitute essential research tools and are not used for routine transportation. An amount of \$45,000 will allow the establishment of a five-year replacement cycle for overaged vehicles to support all facilities and research programs.
- Major components of large central air conditioning systems need cyclic replacement to insure continued operation. This is essential in a tropical climate in which there is a 365-day-per-year dependence on such systems. The STRI library, its contents, books and manuscripts need continued ambient humidity control for preservation. Similarly, in laboratories throughout STRI, control of temperature and humidity is a prerequisite for scientific equipment and specimens. To meet necessary standards, \$50,000 will be used for continued replacement of valve plates, compressors, condensers and evaporators.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from a variety of sources including receipts and collections from users of Barro Colorado Island Nature Monument facilities (20 U.S.C. 79b(d)) and annual allotments. They are used to support, in part, the salaries and related costs of the fellowship education program, the senior sabbatical program, insurance, supplies and facilities maintenance. Funds also are used to finance a short-term fellowship program in tropical biology, visiting scientists and students, field research, seminars and lectures, and to defray expenses at international

scientific colloquia and ceremonial occasions. Funds also were provided from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program for training in tropical biology, fellowships, field research, and environmental and research education in the tropics. Expenditures under this Program and the Research Opportunities Fund, totaling \$137,000 in FY 1984, have not been recorded for FY 1985 and FY 1986 which explains the variance in totals shown between FY 1984 and the subsequent two years.

Restricted Funds - Funds provided here are in the form of restricted endowments which specify the use of the donation or bequest and of gifts and grants from individuals, foundations, organizations or corporations for specific purposes. These are used to support: scientific research related to the biological, ecological and behavioral processes on which tropical ecosystems are organized; research related to geophysical events; publication and distribution of research results; and studies relating to endangered tropical environments. Among these funds is the Walcott Endowment Fund which supports the study of the relationship between coral growth parameters, coral recovery and coral destruction (estimated expenditures of \$8,000 in FY 1985 and in FY 1986). Continuing support from the Exxon Corporation will be used to provide short-term tropical biology fellowships and assistance to 30 students from developing Latin American countries (estimated expenditures of \$44,000 in FY 1985 and in FY 1986); and the significant grant awarded by the W. Alton Jones Foundation, Inc., for the following research projects: management of the green iguana to determine whether populations can be increased for human consumption; the possibility of domesticating the paca as a food source; the possibility of increasing the mammal populations in the natural forests; developing horticultural practices to be used inside tropical forests (the latter project funded by another foundation). These projects are developing alternatives to the destruction of tropical forests and are being carried out over a five-year period in the West Bank of the Panama Canal in the vicinity of the Barro Colorado Island Nature Monument (estimated expenditures of \$320,000 in FY 1985 and \$169,000 in FY 1986).

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**		FTP**	
			Amount	Amount	Amount	Amount	Amount	Amount	Amount	Amount
FY 1984 Actual	67	3,098	1	74	-	90	-	19	7	298
FY 1985 Base	68	3,436	1	76	-	111	-	19	7	390
FY 1986 Estimate	68	3,725	1	79	-	106	-	9	6	303

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	68	0	68
11 Personnel Compensation.....	2,054	65	2,119
12 Personnel Benefits.....	257	9	266
21 Travel.....	26	-	26
22 Transportation of Things.....	1	-	1
23 Rent, Communications & Utilities....	197	-	197
24 Printing & Reproduction.....	6	-	6
25 Other Services.....	316	23	339
26 Supplies & Materials.....	289	23	312
31 Equipment.....	290	169	459
Total	<u>3,436</u>	<u>289</u>	<u>3,725</u>

Analysis of Increase

Necessary Pay.....	74
Inflation.....	46
Restoration of FY 1985 2% Reduction....	69
Program Funds.....	100

ABSTRACT - The Smithsonian Environmental Research Center (SERC) performs basic scientific research in two interrelated biological disciplines: (1) environmental biology - the study of plants and animals in natural environments and in simulated laboratory conditions to understand the growth, development and succession of whole environmental systems; and (2) regulatory biology - the study of mechanisms that regulate the growth and development of whole organisms down to their cellular and subcellular levels. SERC also maintains a radiocarbon dating laboratory that provides age estimates of archeologically important samples for the Institution's museums and outside research institutions. SERC currently occupies a research laboratory building in Rockville, Maryland (formerly the Radiation Biology Laboratory); and a 2,600-acre site near Edgewater, Maryland (formerly the Chesapeake Bay Center for Environmental Studies), consisting of a tidal

river system and surrounding land. For FY 1986, an increase of \$100,000 is requested to continue a phased scientific equipment acquisition program. Necessary pay of \$74,000 is required for existing staff and an amount of \$46,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$69,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - Since the Smithsonian Environmental Research Center was established in 1983 by the merger of the Radiation Biology Laboratory and the Chesapeake Bay Center for Environmental Studies, SERC research programs have concentrated in two major areas: environmental biology and regulatory biology.

Research in Environmental Biology - Environmental biology studies organisms at the level of populations, communities, ecosystems, and landscapes. Much of SERC's research in this field comprises a long-term interdisciplinary study that utilizes a tidal river (the Rhode River) and its watershed as a natural laboratory. Geographical and theoretical comparative studies, as well as the use of simulated but controlled environments, also are undertaken for this research. The SERC program at Edgewater concentrates on (a) how such driving forces as land use, air quality, atmospheric deposition, and variations in weather affect the movement of nutrients, sediments and other materials throughout this land/water mosaic; (b) the population dynamics and structure of important or key species and assemblages of biota; and (c) the productivity of the system's components. Research is designed to examine how changes in one part of the system affect the rest of the Rhode River system and how this entire environmental system interacts with the larger Chesapeake Bay.

Research in Regulatory Biology - Regulatory biology studies organisms at levels ranging from molecules to whole organisms. Research emphasis is on the mechanisms by which growth and development are affected by environmental factors, such as light intensity, color and timing; temperature; humidity; and carbon dioxide levels. Individual projects include the determination of the molecular structure of pigment molecules; the assembly processes for making and inserting molecules in photosynthetic membranes; the timing and chemical control of the formation of reproductive structures; the light activation and regulation of genes and enzymes; the control of photosynthetic productivity in controlled environments (especially those controlled for light, water content and carbon dioxide); measurements of the membrane properties of cells; and the characterization of stimulus-response systems related to light and gravity in fungi.

Research Results - The periodic increases and decreases in ultraviolet sunlight received at the Earth's surface are the result of fluctuations in the amount of ultraviolet radiation produced by the sun and are not caused by either the activities of man or volcanic activity. These findings are based on current data from land-based instruments operated by SERC. Data obtained by National Aeronautics and Space Administration satellites of solar radiation above the atmosphere support this finding. In light of these new data, concerns on how human activity (i.e., introduction of fluorocarbons) may affect the Earth's atmosphere by altering the ozone concentrations, and thus changing the amounts of ultraviolet radiation transmitted, must be re-evaluated. Instruments are scheduled to be installed in FY 1985 at Mauna Loa Observatory on the island of Hawaii in collaboration with the National Oceanic and Atmospheric Administration to measure ultraviolet radiation at the peak and at sea level. These measurements in the relatively clean atmosphere remote from urban pollution will provide a better indication of the changes in ultraviolet due to atmospheric changes specifically in the troposphere.

Long-term measurements of the color quality and amounts of visible solar radiation over a 15-year time period have been completed and indicate a remarkable stability for any given geographical location. This stability is true only for the visible portion of sunlight and since most of the visible sunlight changes so little, measurements are no



longer needed in wide bands. These data provide an extensive base line available to future solar research. Instruments constructed by SERC that measure in relatively narrow bands in the visible portion of the spectrum have proven to be very reliable, and their use will continue in measuring selected bands of sunlight of interest for specific biological responses such as photosynthesis or flowering.

Research at SERC indicates that the far-red portion of natural sunlight interacts with an internal rhythm of a plant leaf to control pore size. The opening of the pores on leaves (stomates) which allows for the entry of carbon dioxide for photosynthesis has been thought to be regulated by blue light or red light that is effective for photosynthesis. However, the new data show far-red light to be most effective when other qualities of light are simultaneously present. Thus, the amount of far-red light present is apparently the significant cue enabling plants to carry out maximum rates of photosynthesis under natural conditions. However, the pigment responsible for detecting this signal and the biochemical pathways affected are still unknown. Experiments are being pursued to define more precisely the role of far-red radiation in controlling pore size.

The populations of many species of woodland birds which breed in the eastern United States are believed to be affected by the fragmentation of forests. A study of this relationship in 270 forest patches in Maryland (partially supported with State funds) found that the abundance of almost every bird species breeding in the interior of upland forests was influenced significantly by forest area, isolation of patches, or forest structure. Highly migratory species such as warblers tended to be most abundant in extensive stands of mature, floristically diverse forests. Densities of permanent residents, such as bluejays and short-distance migrants such as robins tended to be less affected by these site characteristics.

A long-term estuarine ecosystem study, which examined the role of tidal marshes and mudflats in the interception of nutrients and sediments in land runoff, found that high and low elevation tidal marshes imported particulate matter and exported dissolved matter. Tidal exchanges were the major source of phosphorus to the marshes while rain was the major source of ammonia and nitrate. However, net retention or release of nutrients by the marshes was minor compared to retention of nutrients by the tidal mudflats. Thus, the mudflats were the most important habitat with respect to intercepting pollutants in land runoff. These findings are of particular importance to managers concerned with developing effective protection programs for wetlands.

Educational Activities - SERC provides a broad range of educational activities, including teacher-led field trips, self-guided nature trails, and guided tours in which groups of students and the general public observe firsthand a variety of natural habitats. A work-learn program enables students to work with scientists, both in the field and in the laboratory. Pre-doctoral, post-doctoral, and sabbatical programs for professionals at all levels enable visiting researchers to carry out collaborative or independent research at SERC. The results of SERC's research are disseminated through the publication of articles in scientific journals, the presentation of research findings at national and international scientific meetings and invited seminars at universities, the training of scientists, and public education activities.

EXPLANATION OF PROGRAM INCREASE - A comprehensive scientific equipment survey was initially conducted in September 1983 at the Smithsonian Environmental Research Center to determine SERC's equipment acquisition needs. The survey, which was updated in June 1984, included all scientific equipment held by SERC and showed that 55 percent of the equipment should be replaced within five years at a total estimated cost of \$2,330,000.

Funding for the first phase of this program, appropriated in FY 1985, has been used to acquire two pieces of laboratory equipment. A freeze-fracturing system will provide data previously unobtainable on the three-dimensional structure of biological membranes that are sensitive to light and are involved in the capture, storage and transfer of energy from sunlight. A mass spectrometer will provide rapid and precise data on the movement of the nutrients and specific compounds through the food chains in complex natural environments by utilizing naturally occurring isotopes of carbon, oxygen and nitrogen. The acquisition of these two instruments will provide the capability of the state-of-the-art techniques that assist in answering research problems while markedly increasing the rate at which data can be obtained.

During FY 1986 and following years, SERC will continue this long-term program for the replacement of specialized research equipment required for the study of environmental and regulatory biology. For FY 1986, an increase of \$100,000 is requested to provide an expanded base of \$240,000 to support this scientific equipment acquisition. In FY 1986, the scientific equipment needs of SERC include the purchase of a gamma radiometer (\$56,000), used to analyze the light spectra in controlled plant growing experiments; two controlled irradiance light systems (a total of \$50,000), to control the level of light allowed within a growth chamber; a carbon dioxide analysis system (\$41,000), used to measure the ratio of gases present in controlled plant growing chambers; a radio carbon dating system with amplifier (\$25,000), used to record the radiation given off by the carbon 14 decay in archeological and geological samples in order to establish the date of the sample; three centrifuges for general laboratory use (a total of \$23,000); a scintillation counter (\$15,000), used to trace the metabolism of biological systems; and an ultra-low laboratory freezer (\$5,000), used to store biological samples at -80° C. SERC also will require the purchase of a variety of scientific meters to measure the relative acidity of biological samples, the total discharge of water through a weir, and the velocity of water in a stream (a total of \$25,000). The equipment acquisition is a recurring program and is expected to constitute a major portion of the Smithsonian Environmental Research Center's proposed increases through FY 1990.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by allotments and sales proceeds of educational brochures and materials. Uses include support of special events, work-learn and fellowship programs, and the salary costs of a docent coordinator and a part-time public program director (estimated expenditures of \$187,000 in FY 1985 and \$185,000 in FY 1986).

Restricted Funds - These are provided through donations, bequests and foundation grants that are designated for specific subjects of investigation. For SERC, these include the Eppley Foundation Grant to support investigation of biological responses to solar radiation and the Rollins Endowment Fund used to support the study of physical measurements of radiation (estimated expenditures of \$19,000 in FY 1985 and \$9,000 in FY 1986).

Federal Grants and Contracts - These funds are provided by various Federal and state agencies for special projects which can be conducted at SERC because of the expertise of the staff and the physical site characteristics. Contracts from the Chesapeake Research Consortium, U.S. Department of Energy and the University of Minnesota are expected to total approximately \$390,000 in FY 1985 and \$303,000 in FY 1986.

NATIONAL AIR AND SPACE MUSEUM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount			FTP**	Amount
FY 1984 Actual	213	7,477	-	39	29	2,354	-	134	1	139
FY 1985 Base	211	8,331	-	8	29	2,568	-	75	1	198
FY 1986 Estimate	211	8,779	-	8	29	2,023	-	83	1	183

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	211	0	211
11 Personnel Compensation.....	5,803	185	5,988
12 Personnel Benefits.....	694	24	718
21 Travel.....	52	5	57
22 Transportation of Things.....	58	-	58
23 Rent, Communications & Utilities....	29	-	29
24 Printing & Reproduction.....	124	39	163
25 Other Services.....	545	90	635
26 Supplies & Materials.....	404	27	431
31 Equipment.....	622	78	700
Total	<u>8,331</u>	<u>448</u>	<u>8,779</u>

Analysis of Increase

Necessary Pay.....	209
Inflation.....	73
Restoration of FY 1985 2% Reduction....	166

ABSTRACT - The National Air and Space Museum (NASM) serves as an international repository for artifacts and documentation related to the development of aviation, space flight and space science. NASM's programs encompass exhibitions, research, preservation/restoration, and education. The Museum serves a wide public and scholarly audience interested in the history and technological achievements of aviation and space flight. In addition to its Mall location, NASM maintains a facility for the preservation and restoration of artifacts at the Paul E. Garber Preservation, Restoration and Storage Facility in Suitland, Maryland. No program increase is requested for FY 1986. Necessary Pay of \$209,000 is required for existing staff, and an amount of \$73,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$166,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - During FY 1986, the National Air and Space Museum will celebrate two anniversaries: the 40th anniversary of the establishment of the Museum and the 10th anniversary of the NASM building. Established by law on August 12, 1946, NASM's role as a national resource for public and scholarly interest in the air and space fields was greatly strengthened by the completion of the current museum building on The Mall in 1976. More than 85 million people have visited the Museum since it opened, making it the most popular museum in the world. NASM's collections consist of more than 300 historic aircraft, 250 spacecraft, and extensive holdings of artifacts, papers, photographs, microfiche, video disc and technical drawings, which are available for study by interested scholars throughout the United States and abroad. The exhibition program uses state-of-the-art techniques in exhibit design and presentation to convey excitement of the subject matter to the visitor. An active scientific program, aimed at understanding both Earth and planetary geology, continues as an important endeavor of the Museum. Active programs in collections management, preservation and restoration of artifacts remain as a centerpiece of the Museum's curatorial efforts. As a public institution, considerable emphasis is placed on the education and outreach activities through lectures, films, planetarium presentations, and written materials for schools and visitors to the Museum.

NASM maintains exhibits preparation, collections storage and management, and preservation and restoration programs at the Paul E. Garber Facility in Suitland, Maryland. The Museum has restored more than 55 historic aircraft and spacecraft from its collection at the Garber Facility, with the restoration of at least three more each year planned during the next several years. The Garber Facility also presents to the public approximately 90 aircraft, numerous spacecraft and other flight-related objects. In 1984, approximately 17,000 people visited the Garber Facility on scheduled tours throughout the year and during the annual open house.

Research - Research is the basic foundation of the Museum's efforts as a primary center for the study of the science and technology of aviation and space and geophysical science. The results of research projects support the exhibitions, publications, educational, historic restoration, and archival preservation programs. In FY 1984, the research staff was reorganized under an associate director and three curators were added in the fields of Manned Space Flight, Computers and Guidance Systems, and Air Transportation. The research projects undertaken by the Museum are in the following subject areas: earth and planetary studies, space science and exploration, aeronautics, and contemporary history. Furthermore, the Museum sponsors two applied research and development programs in the restoration of historic aircraft and spacecraft, and in the storage and retrieval of archival and visual information.

Earth and Planetary Studies: The Center for Earth and Planetary Studies was established in 1973 to conduct research in comparative planetology and in the development of the Earth's landforms and surface composition by analyzing remote-sensing data obtained from satellite. Research analysis of remote-sensing data uses scientific information gathered by satellite and analyzed by computer to produce geological and topographical studies of areas of the surface of the Earth, the Moon, and other planets. In FY 1984, a new research project on satellite remote sensing of central Mali was initiated to determine the long-term effects of climate change on the fragile environment of the inland Niger Delta region. Research in mapping and analyzing the origin of surface features on the Moon and Mars continued in FY 1984 with additional funding from the National Aeronautics and Space Administration (NASA).

In FY 1983, NASA designated the Center for Earth and Planetary Studies as a Planetary Image Facility, a repository allowing researchers access to the collections of images of the planets taken by NASA space probes.

Space Science and Exploration: The Museum's research and documentation of the Space Telescope (an astronomical observatory scheduled to be launched into orbit by NASA in

August 1986) will serve as a rich source of research material for historians in the future, and provide a valuable current record of space technology. The continuing oral history project on the Space Telescope already has resulted in 143 hours of interviews with 40 people; these transcripts are currently being used by numerous scholars in their research. A publication on the Space Telescope has been scheduled to coincide with its launch. NASM plans to develop a similar research project on the development of the proposed Space Station.

Aeronautics: The Museum began an extensive research effort in FY 1983 on a multi-volume publication, the Smithsonian History of Aviation, covering the history of flight from antiquity to the present. Expected to become the standard for researchers in the field, work on the History already has resulted in a detailed outline for the entire publication and the completion of 10 of the 40 chapters to be included. The first volume is expected to be completed in FY 1986. As a direct result of the research conducted on this project, the Museum has acquired the entire Time-Life reference library of aeronautical document files, photographs, and its collection of 2,000 books.

Exhibitions - In FY 1984, new exhibitions at the Museum included: "Live from Mars," presenting close-up images of the planet Mars (never before presented publicly) that had been transmitted from the Viking 2 Lander over a two-year period; "Dr. Franklin's Window," commemorating the 200th anniversary of flight by recreating what it would have been like to view the first flight in history (made in Paris, France on November 21, 1783); and the opening of the major gallery "Golden Age of Flight." Two important artifacts in the history of American space exploration, the flight suits worn by Sally Ride and Guion Bluford during their Space Shuttle missions, also were placed on exhibit. As part of the commemoration of the Harry S. Truman centennial, a special exhibition on the Berlin Airlift of 1949 was presented.

Exhibition plans for FY 1985 include increased emphasis on scientific topics that also are of historical interest. Work began on a new gallery entitled "Looking at Earth," which will explore efforts to see the Earth from higher vantage points, starting with early attempts using birds and kites, continuing with balloons, aircraft, spacecraft, and finally satellites to study the Earth's changing surface. Also in the current year, NASM will continue its extremely popular art exhibits with a Robert McCall retrospective including many works from the movie "2001, A Space Odyssey." Another new exhibition will examine the aeronautical developments of LeRoy Grumman and his achievements in the industry. In the Albert Einstein Planetarium, a new show "Comet Quest" commemorates the reappearance of Halley's Comet and explains the fascinating history of this famous comet.

In FY 1986, NASM is planning to provide a live "feed" of the Voyager-Uranus encounter that will present computer-generated images as they are received from the Jet Propulsion Laboratory and NASA's Deep Space Network. Other exhibitions will concentrate on the life and achievements of Scott Draper, the "father" of inertial navigation (the key to space flight); and the fascinating life of bush pilots. The "Looking at Earth" gallery also is scheduled open in FY 1986.

Exhibitions are complemented by film presentations related to air and space travel in a specially equipped theater which uses an innovative high-resolution projection system (IMAX) and a giant screen for extraordinarily realistic effects. The extremely popular IMAX film presentations have continued to generate much enthusiasm from visitors throughout the eight-year existence of the theater. In FY 1985, a new IMAX film about the Space Shuttle, "The Dream is Alive," will debut, featuring actual film footage shot by the astronauts on the Shuttle missions. "On the Wing," a film comparing natural and mechanical flight, will premiere in FY 1986.

Development of Collections - In FY 1984, aircraft acquired for the collection included a Dassault Falcon jet, Bell 206L LongRanger, and a Republic RC-3 Seabee. An

historic first occurred when the National Aeronautics and Space Administration transferred title of the Viking 1 Lander, located on the planet Mars, to the Smithsonian. The Lander is the first museum artifact of any museum presently located on another planet. During FY 1985 and FY 1986, NASM's plans for developing the aircraft collections include the acquisition of ultralight aircraft and commercial transports. Additional space artifacts also are anticipated to be acquired from NASA missions.

Preservation and Restoration of the Collections - The aircraft and spacecraft restored at the Garber Facility in FY 1984 included the Nakajima J1N1-S Irving, the 1912 Wiseman-Cooke, the Fairchild ATS-6 satellite, and the Minuteman III missile. In addition, the treatment program to reduce further deterioration of aircraft not yet restored, begun in FY 1983, dramatically reduced the rate of corrosion and enhanced the ability of the Museum to care for its historic artifacts that require immediate attention. In FY 1985, major preservation work will be conducted on the historic 1903 Wright Brothers Flyer. The work, including cleaning, chemical treatment, and protection, marks the first time that extensive preservation treatment has been performed on the Flyer since Orville Wright prepared it for exhibition in 1927. Because of the historical significance and public interest in this historic airplane, NASM will perform the work in the Museum building on The Mall in order to allow the public to view the work in progress. As part of an expanded preservation effort, the Space Science and Exploration Department's Artifact Preservation Group developed a series of seminars to increase awareness and knowledge of artifact preservation, including a comprehensive set of guidelines for exhibition, care and handling of space suits for NASM by other museums. The preservation of spacecraft and space artifacts will present major challenges to the Museum in the future, since their design, construction, and material composition had been based on one-time use in zero-gravity environments without oxygen, and not for extended storage or display on the Earth's surface.

Video Disc Project and the Development of the System for Digital Recovery - With funding provided in FY 1985, the National Air and Space Museum has been able to accelerate its two archival programs utilizing video disc and computer technology: the Video Disc Project and the System for Digital Recovery. In FY 1986 and following years, the Museum will strive to maintain its pioneering leadership in the application of these technologies to the collections management and research fields.

Video Disc Program: NASM's video disc storage program, which ensures the preservation and research access of archival photographic and other visual collections, consists of the filming of the photographic images on 35mm film and the transfer of this film onto video disc format. Since FY 1982, over 300,000 photographic images have been transferred to these video discs, facilitating greater access to the collection while eliminating the loss or destruction of the original photographs. Because these discs are easily and inexpensively duplicated from the master, the Video Disc Project greatly enhances the availability of these photographic collections to scholars throughout the United States and abroad.

Development of the System for Digital Recovery: The technological breakthrough developed by NASM in FY 1984, the System for Digital Recovery, applies state-of-the-art computer and video technologies to the storage, retrieval, preservation, and automated indexing of any printed text, handwritten text, photographic material, and drawings and illustrations. Utilizing the most advanced technological innovations in computer and video technologies that are commercially available, the uniqueness of the system is provided by the combination of these separate hardware and software components into an integrated system that translates any historical document into a digital format, and produces a printed copy of the text, a facsimile reproduction of the original, or a full-text index search of any word combination. Once the document has been digitized, it is automatically indexed and stored on an optical digital disc. Following a patent search conducted in FY 1984, the Smithsonian has applied for a patent for this digital recovery system.

With funding provided in FY 1985, NASM purchased equipment components and software packages for the prototype system. It is anticipated that three production systems will be ready for testing by April 1985. In FY 1986 and following years, the system will be refined as the state of computer and video technological innovations provide advances in hardware and software components for the system.

Public Education and Orientation - NASM continues its elementary and secondary programs of outreach through teacher workbooks, brochures, and other curriculum materials. Tours of the Museum led by volunteers have been given to school groups visiting from schools outside the Washington metropolitan area. The academic emphasis of the Museum's University Programs Office has created a cooperative effort between NASM and New York University (NYU). In FY 1984, some of the undergraduate students in NYU's Department of the History of Science conducted a portion of their course work at the Museum and received hands-on experience working with such materials as a replica of the Wright Brothers' wind tunnel. NASM also presents many series of free lectures, seminars and films to the public, including the General Electric sponsored lecture series, the Von Braun lecture, the Charles Lindbergh Memorial lecture and the Exploring Space with Astronomers lecture series.

During FY 1985, NASM will concentrate on expanding its association with academic and scientific organizations as part of its expanded research efforts. Seminars will be conducted with the Society for the History of Technology to establish the basis for future NASM and university-level relations, projects and courses. In FY 1986, the Museum will plan and present a program of public events and activities to commemorate the 50th anniversary of the initiation of commercial service of the DC-3.

Publications - The publications for FY 1985 include various historical monographs, the Wright Symposium papers, artifact series publications on the History of Space Suits, and the catalogue on Space Shuttle Art. The first volume of the Smithsonian History of Aviation will be completed in FY 1986. Additional publications in FY 1986 include U.S. Women in Aviation 1930-1939, the catalogue of Space Astronomy Oral History, Congreve and Hale Rockets, an artifact series publication on Apollo 11, and famous aircraft series publication Boeing 247. In FY 1984, NASM published its first annual Research Report, which will be followed by the publication of similar reports each year.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from a variety of sources including the Museum's share of net proceeds from the shops and restaurant, and the net proceeds resulting from bureau activities (such as the Theater and Planetarium) and small allotments. In addition to meeting expenses of the Theater and Planetarium, these funds are used to finance fellowships, guest lecturers, symposia and special events for the opening of new exhibits. Portions of the proceeds from the Theater and Planetarium are being reserved for the replacement of the film entitled "Flyers" and for support of other Institutional programs. Outside funding has been received for "The Dream Is Alive," a new IMAX film taken on the Space Shuttle to be completed in FY 1985. In the Albert Einstein Planetarium, the Museum presented a new multi-image show, "200 Years of Flight," in FY 1984; and premiered "Comet Quest" in FY 1985 to commemorate the reappearance of Halley's Comet in 1986. Continuing support also is provided for distinguished scholars to study at the Museum through the Lindbergh Chair of Aerospace History and the Chair in Space Science History. Other fellowship programs include Guggenheim and Verville, which support pre- or post-doctoral students and other distinguished scholars in aviation and space science.

Restricted Funds - Funds provided here are in the form of restricted endowments which specify the use of the donation or bequest, and of gifts and foundation grants by individuals, organizations or corporations for specific purposes. Examples of

these funds are the Ramsey Endowment, used to finance research relating to naval flight history (estimated expenditures of \$25,000 in FY 1985 and \$26,000 in FY 1986), and the Guggenheim Endowment, which is used for lectures and stipends (estimated expenditures of \$13,000 in FY 1985 and \$20,000 in FY 1986).

Federal Grants and Contracts - These are provided by various agencies and departments for special projects which can be conducted at NASM because of its expertise in a given area. Continued funding from the National Aeronautics and Space Administration's grant program supports the following research activities in planetary geology by the Museum's Center for Earth and Planetary Studies: photogeologic investigation, planetary terrain, thermal infrared studies and morphologic studies of the Moon (estimated expenditures of \$68,000 in FY 1985 and in FY 1986). Additional support from NASA continued efforts in mapping and analyzing the origin of surface features on the Moon and Mars (estimated expenditures of \$40,000 in FY 1985 and \$42,000 in FY 1986). A new research project on satellite remote sensing of central Mali was started in FY 1984 to determine the long-term effects of climate change on the fragile environment of the inland Niger Delta region. In FY 1985, this research will be expanded to cover fringe areas of the world's deserts, delineating areas prone to soil erosion (estimated expenditures of \$60,000 in FY 1985 and \$41,000 in FY 1986). The Space Telescope Historical Project, a combined effort with the Johns Hopkins University and NASM, also is partially funded by NASA (estimated expenditures of \$30,000 in FY 1985 and \$32,000 in FY 1986).



NATIONAL ZOOLOGICAL PARK

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
FY 1984 Actual	318	10,720	1	66	-	225	-	44	1	130
FY 1985 Base	318	11,276	1	99	-	119	-	128	1	49
FY 1986 Estimate	318	11,869	1	99	-	108	-	114	1	51

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	318	0	318
11 Personnel Compensation.....	8,365	263	8,628
12 Personnel Benefits.....	1,046	33	1,079
21 Travel.....	38	2	40
22 Transportation of Things.....	10	1	11
23 Rent, Communications & Utilities....	54	2	56
24 Printing & Reproduction.....	16	1	17
25 Other Services.....	434	66	500
26 Supplies & Materials.....	1,117	153	1,270
31 Equipment.....	191	72	263
42 Insurance Claims & Indemnities.....	5	-	5
Total	<u>11,276</u>	<u>593</u>	<u>11,869</u>

Analysis of Increase

Necessary Pay.....	296
Inflation.....	72
Restoration of FY 1985 2% Reduction....	225

ABSTRACT - In its 1889 charter, the National Zoological Park's mission was defined as "the advancement of science and the instruction and recreation of the people." Today these goals are accomplished through programs that make the National Zoological Park a leading international center for animal exhibition, biological and veterinary research and public education in conservation and the humane care of animals. The Zoo houses its public collection on a 163-acre site at Rock Creek Park in Washington, D.C., and also maintains a major conservation, captive breeding and research center at Front Royal, Virginia, where it manages 3,150 acres. Through its programs in research, conservation, animal health, and education, the Zoo serves the public and specialized audiences in understanding animal adaptations and evolution, and the interaction of wildlife with the environment. No program increase is requested for FY 1986. Necessary pay of \$296,000 is

required for existing staff and an amount of \$72,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$225,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The National Zoological Park is responsible for the maintenance and welfare of approximately 2,200 animals comprising 397 species at the Rock Creek site. The species are chosen primarily to be interesting to the public and because they contribute to research and conservation. The collection of animals at the Conservation and Research Center (CRC) at Front Royal are selected for their long-term breeding potential and generally because they are threatened or endangered. More than 700 animals representing 65 species are housed at CRC.

In addition to its traditional animal management practices, the Zoo is playing a major role in developing new techniques for long-term sperm storage and embryo transplantation; these techniques may play a crucial part in future conservation efforts. However, the National Zoo can not fulfill its conservation objectives by its research activities alone. Many species are endangered because of manmade disturbances to their natural habitats, particularly in the tropics. For this reason, the Zoo has an energetic program of conservation research in the natural habitats of endangered species and is conducting pioneering studies in the reintroduction of animals bred in captivity. The major programs of the National Zoo are grouped as follows: Animal Exhibition, Animal Management, Animal Conservation and Propagation, Research, and Public Education and Information.

Animal Exhibition - The ultimate purpose in exhibiting animals is to interest the public in animal biology and the role of animals in the environment. To achieve this objective, animals must be provided with as natural an environment as possible. They also must be provided with the physical conditions necessary for a complete and active life. For example, the recently completed Small Mammal House provides esthetically pleasing and attractive settings for a broad range of exciting animals. Breeding successes with animals in this new exhibit attest to the success in simulating the natural habitat.

In 1984, using construction funds appropriated in FY 1983, planning for the first stage of Olmsted Walk was completed. The entire project will enhance greatly the appearance of the Zoo; it also will increase pedestrian comfort and access to the exhibits. Thousands of trees, shrubs and plants will be added to the Park and several exhibits along the walk will be improved or created. Plans are complete to redevelop the wetlands exhibit at the Rock Creek entrance to produce a habitat that will show the public the wealth of animals to be found in the wetlands of the United States. A new tortoise exhibit will be created and the Zoo will build an innovative gibbon exhibit that will give visitors a multilevel view of these highly gymnastic and engaging primates. The new exhibits will be in harmony with the existing and mature trees of the present Park. The actual construction for Olmsted Walk is divided into three phases. Construction of the first phase is scheduled to begin in spring 1985.

In October 1984, American plains bison were placed on exhibit at the Zoo after an absence of nearly 20 years. When the Zoo was established in 1889, the bison became one of its first exhibits. In 1800, tens of millions of bison roamed North America. By the end of the century they numbered fewer than 1,000 animals. Today, the bison population numbers approximately 70,000, representing one of the best examples of how conservation action can save a species on the brink of extinction.

Animal Management - The health and well-being of the animals under the Zoo's care is of overriding importance. The continuing efforts to provide animals with natural and congenial conditions in exhibits contributes increasingly to an excellent overall state

of health and a general absence of stress. Additionally, modern animal health care practices of the very highest standard constantly are available. The National Zoo provides the most advanced techniques in preventive medicine, emergency treatment, surgery, dentistry and neonatal medicine. This is reinforced by a scientifically-based nutritional program and the very highest standard of food preparation. Comprehensive medical and general records, the majority of which are automated, are kept on all animals. These records are a major tool in maintaining the Zoo's health standards and in developing breeding programs.

In an average year, approximately 2,500 medical cases require attention; about 500 of these require hospitalization. Success rates in the treatment of illness remain very high. Construction started in late FY 1984 on a new medical facility at Front Royal. In 1983, more than one-third of the medical cases and one-half of the anesthetic procedures were done at a makeshift facility. The new hospital will provide advanced diagnostic, clinical and surgical support for CRC.

Animal Conservation and Propagation - Breeding successes in 1984 included the production of six water dragons, 21 leopard geckos, and 76 young from four snake species. In addition, the Conservation and Research Center continues to play an important role in research and breeding programs for rare and endangered species. Its facilities provide a unique environment for the establishment of selected breeding programs that can not be matched in a standard zoo setting. The Center has bred successfully such animals as zebras, Bactrian camels, scimitar-horned oryx, Pere David's deer, maned wolves, lesser pandas, binturong, and selected birds, especially cranes. The Zoo also will continue to play an active leadership role in a variety of national cooperative breeding programs including golden lion tamarin, gorilla, orangutan, and tiger.

The National Zoo is very active in international programs in biological conservation. In 1984, golden lion tamarins which had been bred in captivity, were reintroduced to the wild to a protected forest in Brazil. This was the ultimate step in a comprehensive and pioneering program to save this beautiful animal from extinction. All of the problems involved in this program were not apparent initially. It was necessary at first to develop techniques for proper reproduction at the Zoo; these animals then had to be acclimated to the climate and different foods in their native land, which was accomplished successfully. Finally, they had to be "educated" to fend for themselves in the wild. This process involved detailed training in recognizing dangers and enemies. The monkeys also had to be taught how to recognize a wide range of naturally occurring edible objects and how to find them. At present these animals are thriving in their native home.

An important contribution to conservation is made by training Third World students in wildlife management. In 1984 alone, students from India, Sri Lanka, Ghana, Nigeria, Sierra Leone, Peru, Malaysia and China attended training courses at the Zoo. Training also is given to United States students in veterinary medicine, pathology, animal behavior and animal management.

Research - The success in reintroducing golden lion tamarins to the wild would not have been possible without sophisticated and painstaking research in the Zoo and in the field. For instance, Zoo researchers had to work out in detail the structure of social and family life of tamarins before they could re-create natural groups of animals that could succeed in the forests of Brazil. Little information was available to scientists when they started the project. Basic research at the Zoo concentrates on understanding the factors that influence the daily lives of animals. Subjects range from communication behavior to nutrition, and these studies lead to the transmission of results through published reports and contributions to scientific congresses. In 1984, the Zoo staff published over 80 scientific articles ranging from reports to books. The publications included a major monograph on the biology and management of Pere David's deer.

The Zoo's genetic studies, in conjunction with those of zoos around the world, and in collaboration with the National Cancer Institute, will result in the maintenance of viable captive populations of critically endangered species in perpetuity. Automated demographic models and long-term breeding plans are being developed for captive tigers, Asiatic lions, and golden lion tamarins. Efforts to determine pedigrees of several hundred captive endangered Bali mynahs were initiated prior to establishing a reintroduction program for this species in Bali, Indonesia. New biochemical studies resulted in an exciting finding that cheetahs show little genetic variation, a possible partial explanation for their poor captive breeding record. Other studies of golden lion tamarins and Dorcas gazelles are being conducted to relate genetic variability, as determined from biochemical studies of blood, to presumed genetic variability based on known pedigrees of captive animals.

Two new research projects were initiated on species completely new to the Zoo's collection. In collaboration with the Duke University Primate Center, the Zoo successfully reproduced western tarsiers, acquired from Malaysia, for the first time. Tarsiers have been little maintained or exhibited in zoos because of their delicate and nocturnal nature. Field studies are to be conducted on behavioral ecology in order to develop a more comprehensive understanding of the biology of tarsiers. The Zoo also will spearhead an attempt to breed Guam rails in captivity. This species is disappearing from the island with astonishing rapidity. The Zoo hopes that the decline of the species can be reversed and that captive-bred rails can be reintroduced to their natural habitat.

Public Education and Information - As part of the broad educational programs, the National Zoo reaches a very large audience with signs throughout the park. More personal educational links are provided through programs such as "meet a snake," and "laboratory" groups like HERPlab, BIRDlab, and ZOOlab. More than 10,000 people, largely family groups, visited HERPlab alone. This program received a national educators award in 1983. The National Zoo's educational activities have received attention from as far away as Japan and Australia. The continued success of "Symposia for the Public," a series created in 1982, testifies to an interest in serious and detailed biological theory on the part of nonspecialists.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived primarily from fees for general use of the facilities at the Conservation and Research Center at Front Royal, Virginia, including use of the conference area by authorized visitors. Expenditures are made for the support and maintenance of these facilities; for the purchase of animals for the collection; and for the salary and support costs for the director.

Restricted Funds - These are provided through gifts and foundation grants and are used to support specific research projects and education programs. For example, funds provided from the American Association of Zoo Veterinarians are being used to support research in the areas of artificial insemination (estimated expenditures of \$28,000 in FY 1985 and in FY 1986); and to study viruses in zoo mammals (estimated expenditures of \$15,000 in FY 1985 and in FY 1986). Funds from the National Geographic Society and the World Wildlife Fund are supporting the golden lion tamarin reintroduction program (estimated expenditures of \$58,000 in FY 1985 and \$54,000 in FY 1986). Finally, funds from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program are used for research programs such as the wildlife forest program and the aspects of foraging behavior in birds between temperate and tropical habitat. Expenditures from this Program and the Research Opportunities Fund, together totaled \$71,000 in FY 1984, but have not been recorded for FY 1985 and FY 1986 which explains the variance in totals for those years.

Federal Grants and Contracts - These are provided by various government agencies and departments for research being conducted by Zoo staff. A grant from the National Science Foundation is being used to support a research project in Sri Lanka on life history strategies in relation to primate genealogy and environment (estimated expenditures of \$49,000 in FY 1985 and \$51,000 in FY 1986).

OFFICE OF THE ASSISTANT SECRETARY FOR HISTORY AND ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1984 Actual	10	598	1	108	-	7	-	-	-	-
FY 1985 Base	9	435	-	3	-	1	-	1	-	-
FY 1986 Estimate	9	457	-	44	-	1	-	28	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	9	0	9
11 Personnel Compensation.....	362	20	382
12 Personnel Benefits.....	45	2	47
21 Travel.....	9	-	9
23 Rent, Communications & Utilities....	7	-	7
25 Other Services.....	8	-	8
26 Supplies & Materials.....	3	-	3
31 Equipment.....	1	-	1
Total	435	22	457

Analysis of Increase

Necessary Pay.....	13
Restoration of FY 1985 2% Reduction....	9

ABSTRACT - The Assistant Secretary for History and Art is responsible for the overview and management of the Smithsonian Institution's history and art programs and activities. No program increase is requested for FY 1986. Necessary pay of \$13,000 is required for existing staff. A further amount of \$9,000 is requested to restore funds eliminated from this line as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - I. The Office of Assistant Secretary for History and Art: With a base of 4 workyears and \$211,000 this Office advises and assists the Secretary in overseeing the programs of the Smithsonian history and art bureaus, which include: the Archives of American Art (headquartered in Washington, D.C. with regional offices in Boston, Detroit, New York, San Francisco and Los Angeles); the Cooper-Hewitt Museum in New York City; the Center for Asian Art, consisting of both the Freer Gallery of Art and the Arthur M. Sackler Gallery; the Hirshhorn Museum and Sculpture Garden; the National Museum of

African Art; the National Museum of American Art and its Renwick Gallery; the National Museum of American History; the National Portrait Gallery; the American Studies Program; and the Anacostia Neighborhood Museum. The Office coordinates and manages Institution-wide special projects, programs, exhibitions and publications commemorating significant historical individuals and events. This includes an editorial project to publish the manuscripts of Joseph Henry (1797-1878), the eminent American physicist and first Secretary of the Smithsonian Institution. The Office administers the Regents' Collections Acquisition Program, which was established to facilitate the purchase of major acquisitions by Smithsonian museums. The Office also bears responsibility for the oversight of planning for the use of the Old Post Office Building.

During FY 1985 and FY 1986, the Office of the Assistant Secretary will continue to provide advice and guidance to history and art bureaus in the development of their programs. The opening of the Arthur M. Sackler Gallery and the transfer of the National Museum of African Art to its new quarters in the Quadrangle will be of highest priority. Plans to commemorate significant historical events will continue, including the bicentennial of the signing of the Constitution.

Programs Commemorating Historical Events - In FY 1984, Congress appropriated \$200,000 to the Institution for activities and programs to commemorate the centennial of the birth of President Harry S Truman. From April through December 1984, a number of events were sponsored, including a 20-minute biographical film on Truman produced by and shown at the National Museum of American History; a two-day scholarly symposium on domestic and foreign policy during the Truman era sponsored jointly by the National Museum of American History and the Woodrow Wilson International Center for Scholars; a series of workshops, films and seminars sponsored by the Smithsonian Resident Associate Program; an "evening dialogue" for scholars held at the Woodrow Wilson International Center for Scholars; an exhibition on the 1948 Berlin Airlift at the National Air and Space Museum; and an exhibition examining the political implications of esthetic issues during the Truman presidency at the National Museum of American Art. Similar exhibitions were produced at the Library of Congress and at the National Archives.

II. Joseph Henry Papers: With a base of 5 workyears and \$224,000 this documentary project is dedicated to collecting, transcribing, editing and publishing the manuscripts of Joseph Henry, the first Secretary of the Smithsonian Institution. Publication objectives include: a 15-volume letterpress edition of Henry's correspondence, laboratory notebooks, diaries and other manuscripts; an indexed microfilm edition of approximately 90,000 items; and special publications aimed at more general audiences. The letterpress edition serves two purposes: the publication of often previously unknown letters and other documents provides an essential research tool for scholars in the history of science, and in the history of the intellectual and cultural development of the United States; and the extensive annotation and introductory explanatory essays furnish a valuable interpretive study of Henry and his milieu.

The Office has just concluded the fifth of its letterpress volumes. This volume contains documents spanning the years from 1841 to 1843, when Henry was Professor of Natural Philosophy at the College of New Jersey (Princeton), and still actively engaged in his studies of the natural sciences and in his experimentation on electricity and magnetism. The Office has started research for the sixth volume, which will include documents relating to Henry's call to the Smithsonian in December 1846. During FY 1986, the sixth volume will be sent to press and work will commence on the seventh volume which documents Henry's first years at the Smithsonian. Progress also will be made on the microfilm edition.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided for memberships for the Institution in the American Council of Learned Societies and the American Crafts Council. Special Purpose funds provided editorial assistance for the Finders' Guide to Decorative Arts in the Smithsonian Institution.

Restricted Funds - In FY 1986, the Joseph Henry Papers project anticipates support to help defray the cost of the Joseph Henry Institute Symposia on the history of science and technology in the United States (estimated expenditures of \$27,000 in FY 1986).



NATIONAL MUSEUM OF AMERICAN HISTORY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount				
FY 1984 Actual	302	9,687	2	245	1	643	4	325	-	4
FY 1985 Base	297	11,327	2	175	-	214	2	1,069	-	-
FY 1986 Estimate	299	12,151	2	138	1	232	-	577	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	297	2	299
11 Personnel Compensation.....	8,064	594	8,658
12 Personnel Benefits.....	1,008	46	1,054
21 Travel.....	74	3	77
22 Transportation of Things.....	69	8	77
23 Rent, Communications & Utilities....	27	-	27
24 Printing & Reproduction.....	79	6	85
25 Other Services.....	1,213	75	1,288
26 Supplies & Materials.....	556	27	583
31 Equipment.....	157	65	222
Collections Acquisition.....	80	-	80
Total	<u>11,327</u>	<u>824</u>	<u>12,151</u>

Analysis of Increase

Necessary Pay.....	289
Inflation.....	87
Restoration of FY 1985 2% Reduction....	225
Program Funds.....	223

ABSTRACT - The National Museum of American History (NMAH) collects and preserves America's material culture, the artifacts that embody the Nation's heritage. By carefully enlarging and preserving its collections and using them as a basis for exhibitions, educational programs, research, and publications, the Museum offers scholars and the public the opportunity to understand America, past and present. In addition to the Mall building, the Museum maintains the exhibition "1876 Centennial," located in the Arts and Industries Building, and supervises the movement and care of objects stored in five buildings at the Institution's Suitland Facility. For FY 1986, an increase of 2 workyears and \$223,000 is requested to support costs associated with the movement of objects to the Museum Support Center (1 workyear and \$108,000); and to further automation efforts

(1 workyear and \$115,000). Necessary pay of \$289,000 is required for existing staff and an amount of \$87,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$225,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The National Museum of American History possesses the largest and most diverse collection of objects representing the heritage of the United States. The Museum's collection--over 16,000,000 objects of every size, type, and material--includes stamps and coins, trains, automobiles, textiles, photographs, paintings, sculpture, paper materials, costumes, tools, power machinery, clocks, weapons, ceramics and glass, musical instruments, and scientific instruments of all kinds. To provide better protection of these artifacts, the Museum strives to integrate and improve all the components of its collections management program: acquisition, conservation, registrarial and inventory control, archival preservation, and secure storage of these objects. The Museum presents the history of the American people through these collections, exhibitions, and the wide range of programs including publications, lectures, symposia, concerts, public tours and demonstrations, and film and broadcast features to over five million visitors per year.

Exhibitions - The Museum opened a number of new exhibitions in FY 1984 which include: "Pain and its Relief," tracing the many ways in which people have historically dealt with pain from ancient rituals to modern anesthetics; "Inventing Standard Time," documenting the development of the system of standard time zones to replace a confusing system of local times; and "The Naming of America," featuring a world map (circa 1507) that was possibly the first to use "America" as a geographical name. Two traveling exhibitions, developed in conjunction with the Smithsonian Institution Traveling Exhibition Service (SITES), were mounted in the Museum during FY 1984: "Southeastern Potteries," containing contemporary examples of traditional pottery methods of the southeastern United States (in cooperation with the Festival of American Folklife); and "Yesterday's Tomorrows: Past Visions of the American Future," examining the history of popular expectations about the future in the late 19th and 20th centuries. Finally, in commemoration of the 20th anniversary of the opening of the NMAH building, "Photo History of the Mall" exhibited photographs taken by Smithsonian photographers of events that have occurred on the Mall over the past 20 years.

With funds of \$100,000 appropriated for FY 1985, the research and design phases have begun for an exhibition commemorating the bicentennial of the signing of the United States Constitution: "The Constitution as a Living Document." Other exhibitions planned include: "Graphic Arts: 100 Years," a retrospective exhibition about the collections of the Museum's Division of Graphic Arts; "Domestic Interiors in Eighteenth-Century America," depicting the significant changes in the ways Americans furnished their homes during the 1700s; and "Bridges of Niagara," a loaned exhibit from Canada presenting the history of the nearly 20 bridges that have been built since 1848 at Niagara Falls.

As an introduction to the major reinstallation of the Museum, four public space projects were completed in FY 1984 principally financed with Trust funds. The NMAH Museum Shop and Bookstore, second largest in the United States, opened in March. The "Flag Hall Sound and Light Show," presenting an hourly viewing of the Star-Spangled Banner, also was finished in 1984. Outside the building, the Calder stable was relocated to enhance its orientation to the public, and a 19th-century bandstand has been erected on the west lawn to provide an appropriate setting for live performances.

The Museum's first major reinstallation of a permanent exhibition will open in September 1985. "After the Revolution--Everyday Life in America" depicts American social and cultural development during the late 18th and early 19th centuries. Using period rooms and objects on loan from many collections, the exhibition demonstrates how ways of

life differed among people of various occupations, social situations, and financial means. Other exhibitions are planned in future years to extend this theme through the rest of the 19th and 20th century.

During FY 1986, the Museum will move ahead on reinstalling its permanent exhibitions. By late FY 1986, "Engines of Change: The Industrial Revolution in America" will have opened. This exhibition deals with the forces behind the transfer of industrial technologies from England to America and examines the subsequent course of the Industrial Revolution in this country.

Collections Management - In FY 1983, the Museum completed its shelf inventory of collections and is working to maintain this record as new objects arrive. Computer printouts for verifying the accuracy of information gathered during the shelf survey were provided to most divisions in FY 1984 in preparation for the refinement and reconciliation phases of the inventory program. It is anticipated that the refinement of inventory records of several of the Museum's curatorial divisions will be completed by the end of FY 1986. The process of photographic documentation of selected high-value collections of the Museum, such as stamps and coins, also should be finished in FY 1986. A more complete description of the Museum's inventory accomplishments and goals is included in the Collections Management/Inventory Program section of this budget.

In FY 1984, extensive collections surveys were conducted and pilot projects in the conservation and storage requirements of the Museum's archival and photographic materials were completed. NMAH's Division of Conservation examined or treated over 1,400 objects during FY 1984. To provide the proper storage conditions necessary for collections requiring a controlled environment, such as costumes, the Museum created a cold storage facility. The Museum also continued its program to upgrade storage facilities for its other collections by the purchase of new storage equipment. The security of the collections also was improved by placing alarms on exhibit cases containing high-value or sensitive material and installing a card reader system to be used in high security areas.

The NMAH Archives Center recently finished a first draft of a guide to the Clark Collection of Radio History materials, one of the Center's largest and most complex collections, and an informal guide to photographic collections throughout the Museum. The Center continues to process and organize new collections of manuscripts from curatorial divisions preparing them for use by researchers.

Suitland Facilities and the Museum Support Center - In addition to reference collections at the Mall building, the collections of the Museum are stored currently in five buildings at the Institution's Suitland Facility. Since 1980, a program for encapsulating exposed ceiling asbestos in each of these buildings has been under way. In addition, the fire protection and heating, ventilating, and air-conditioning systems in the buildings are being updated.

In FY 1986, the initial move of some of the Museum's collections to the Museum Support Center (MSC) is scheduled to begin. Preparatory work for the move to the MSC will include final determination of collections and objects to be stored at the MSC; recording of inventory and registrarial information for these objects; and the examination, packing, transfer, unpacking and storage of these objects.

Research - As the result of research conducted by NMAH curatorial staff, the following books were published in FY 1984: Breaking the Land: The Transformation of Cotton, Tobacco, and Rice Cultures Since 1880; Forces of Production; Carl Friedrich Gauss: A Bibliography; Analytical Bibliography of Native American Science, Medicine, and Technology; Understanding Relativity; and A Bibliography of Chemical Technology.

The Museum continues to provide support staff and space for the scholarly publication "Technology and Culture," the official journal of the Society for the History of Technology. In addition, during FY 1984, the Museum helped sponsor the development of a magazine examining black American history. The Museum's Afro-American Communities Project continues to develop a data base of social and economic information dealing with the structure and development of free black communities in ten United States cities prior to the Civil War.

Collections Acquisition - During FY 1984, the Museum received through purchase or gift a number of significant collections. Some of the acquisitions include: a Model A Stearator, 1952-1953, the earliest experimental device for controlled release of nuclear energy by means of the fusion of hydrogen nuclei; a 15-by-8-foot photograph of the Alton Limited Train, circa 1901, taken by George Lawrence and considered at the time to be the world's largest photograph; a rare and important set of six fanback Windsor side chairs, circa 1765, in original, untouched condition (to be used in the "After the Revolution--Everyday Life in America" exhibition); a surveyor's transit, a standard instrument of the 1860s used to lay out railroads and other engineering projects; a 1941 RS-1 diesel locomotive, the first model of a road switcher used for moving trains; and a Whitworth lathe, built in England about 1870, which embodies some of the features of industrial technology important to the success of mechanical engineering in America and Great Britain.

Public Programs - To fulfill its special role within the Smithsonian to enrich the public's understanding of American history, the Museum has reorganized its public service functions into a Department of Public Programs. Concentrating on the interpretation of American history through publications, tours and demonstrations, lectures, special events, recitals, and performances, the Department will develop programs to orient, inform, and educate the public and to reach diverse audiences both locally and throughout the country. More than 10,000 Washington metropolitan area residents and organizations receive the Department's new "Events Calendar," which describes the many concerts, films, tours, and demonstrations that are sponsored by the Museum.

The Program in Black American Culture continued to present concerts, colloquia, workshops, and broadcast features, reflecting the contributions and cultural heritage of black Americans. An eight-part video series, "Voices of the Civil Rights Movement" (based on a conference and exhibit at NMAH in 1981), was broadcast on public television.

During FY 1985 and FY 1986, the Department of Public Programs will continue to bring American history to life by presenting the richness and importance of the Museum's collections to the public. Future programs will include "Museum Masterpieces," a series of 23 musical performances featuring resident musicians playing instruments from the collections, and the "Palm Court Series," educational presentations involving performances and multimedia presentations on early 20th-century social history.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, an increase of 2 workyears and \$223,000 is requested to support costs associated with the movement of objects to the Museum Support Center (1 workyear and \$108,000); and to further automation efforts (1 workyear and \$115,000).

Museum Support Center Move (1 workyear and \$108,000) - The movement of objects from the National Museum of American History to the Museum Support Center (MSC) will require a large amount of preparatory work on the collections being relocated. Such work involves final determination of collections and objects to be moved to the Center followed by their examination, packing, transfer, unpacking and rehousing. Recording inventory and registrarial information on each object being moved is part of the process as well. To date, an amount of \$60,000 has been provided in support of the staffing requirements of

the Museum's conservation lab at the MSC. No funding, however, has been received for the required survey of collections prior to the move, involving object identification, preparation, inventory and the other registrarial tasks. While the Museum has, through its collections managers, done some initial work on identifying collections to be moved, it finds itself sorely understaffed in the technician area. The existing staff of registration and museum technicians is already facing large backlogs in basic inventory maintenance, refinement, and data processing due to cutbacks in staffing and funds, such that performing another major long-term block of work without additional staffing help would be impossible. With the movement of objects to begin in March 1986, it is imperative that additional support be provided at this time. For FY 1986, the National Museum of American History requests a position for a registration technician (1 workyear and \$26,000) to oversee the movement of objects during the period of the initial move and to control the flow of historical objects in and out of the Museum Support Center in future years. A sum of \$7,000 is needed for the purchase of supplies and materials for the preparatory work. In addition, the Museum also requests \$75,000 for five temporary museum technicians to assist with the heavy volume of work associated with the initial move.

Computer Systems Application (1 workyear and \$115,000) - Currently, a sum of \$300,000 is available to support NMAH's Office of Computer Services. These monies support salaries of the staff, maintenance costs of existing hardware, and supplies. Since the Museum began its Collections Management Inventory project, a minicomputer has been used for recording the shelf survey data that had been collected. In FY 1985, the Museum will hire a systems administrator to oversee computer operations, and help develop systems for further refining inventory data so it can be reconciled with existing curatorial and registrarial records.

With the Museum's collections management related automation needs secured, the Museum's Office of Computer Services is directing its attention to the many noncollection management needs. Developing visitor information systems, financial management programs, programs for tracking projects, and other office automation packages will further the usefulness of the Museum's computer system and improve productivity throughout. This effort will require a position for a computer specialist (1 workyear and \$25,000) versed in these types of systems. This individual will contribute greatly to the Museum's small staff of specialists responsible for effective management of these complex programs.

In FY 1985, NMAH purchased and upgraded its existing leased automation system. The computer's storage capacity was greatly enlarged and its ability to accept more terminal access was expanded as well. The Museum now needs to purchase remote terminals and printers in order to bring the system up to its most efficient and productive level of operation. Currently, NMAH possesses only 28 of the 70 terminals required for optimum effectiveness. This shortage of terminals has caused the Museum to restrict access to the computer, giving highest priority to Collections Management. With noncollection management needs lying ahead, increasing access to the computer becomes even more important. Therefore, a further sum of \$65,000 is sought to purchase terminals and printers for use throughout the Museum over the next five years and to establish a regular five-year cycle of upgrading these workstations.

Finally, while the Museum sees some of its software needs being fulfilled through the Office of Information Resource Management, there still remains a distinct need for outside consultants to assist in developing a number of programs not available "off the shelf" and to provide guidance and direction on the use of such systems as video disc technology and the application of such technology to exhibitions, photo archives, and educational programs. To contract for this expertise, an additional amount of \$25,000 is requested.

## NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from a variety of sources including the Museum's share of sales in the museum shop and book store, cafeteria and royalties. In FY 1985, allotments will support the salary and benefits costs of the Museum director and the director's special assistant, the care of the furniture collection and the costs of cataloguing and otherwise making accessible for research the Sultner Photographic Collection. A \$136,000 allotment in FY 1984 supported the Visions Foundation, Inc., which currently is developing a magazine examining black American history. Trust funds also support special events and weekend musical events. Allotments include those from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program and the Research Opportunities Fund which helped support NMAH programs in the areas of affirmative action, scholarly publications, acquisitions and research. Of special note were the purchase of two 17th-century Automata, both very rare examples of early automatic mechanical devices; support of the planning phase for establishing an American Indian program at NMAH; and the presentation of a special program on the music of the National Baptist Convention and its impact on black American sacred music tradition. Expenditures under this Program and the Research Opportunities Fund, totaling \$193,000 in FY 1984, have not been recorded for FY 1985 and FY 1986 which explains the variance in totals shown for those years.

Restricted Funds - Individual or corporate gifts and foundation grants are the principal sources of income under these funds. In FY 1984, a number of exhibitions and special projects received support. The Morris and Gwendolyn Cafritz Foundation awarded the Museum a \$165,000 construction grant to relocate the Alexander Calder stabile from the west side of the Museum to the corner of 14th Street and Constitution Avenue and to put in its place an 1878 bandstand from Jacksonville, Illinois. The Pepsi Cola Company provided a gift of \$41,000 for a special oral history project, and a gift from the Ruther and Vernon Taylor Foundation of \$20,000 is supporting a research and cataloguing project involving this Museum's Patent Model collection. The Museum received a very special gift of \$62,000 from Mr. John Hoffman, a former curator now deceased, which is being used in support of the Museum's Archives Center. In FY 1985 and FY 1986, the Museum will have programs entitled "Musical Masterpieces," a series of 23 musical performances featuring resident musicians playing instruments from the collections (estimated expenditures of \$185,000 in FY 1985 and \$208,000 in FY 1986), and "Palm Court Series," educational presentations involving performances and multimedia depictions of early 20th-century social history (estimated expenditures of \$104,000 in FY 1985 and \$133,000 in FY 1986). The Museum also will seek funds in FY 1985 to revitalize the "Ceremonial Court" near the First Ladies Hall (estimated expenditures of \$312,000).

NATIONAL MUSEUM OF AMERICAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds			
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	115	4,465	-	48	3	123	-	526	-	1
FY 1985 Base	117	4,671	-	57	3	146	-	213	-	-
FY 1986 Estimate	118	4,970	-	45	3	174	-	337	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	117	1	118
11 Personnel Compensation.....	3,154	134	3,288
12 Personnel Benefits.....	320	13	333
21 Travel.....	53	2	55
22 Transportation of Things.....	60	6	66
23 Rent, Communications & Utilities....	36	1	37
24 Printing & Reproduction.....	123	22	145
25 Other Services.....	317	31	348
26 Supplies & Materials.....	265	41	306
31 Equipment.....	79	38	117
Collections Acquisition.....	264	11	275
Total	<u>4,671</u>	<u>299</u>	<u>4,970</u>

Analysis of Increase

Necessary Pay.....	104
Inflation.....	47
Restoration of FY 1985 2% Reduction....	93
Program Funds.....	55

ABSTRACT - With a collection begun in 1829, the National Museum of American Art (NMAA), formerly known as the National Collection of Fine Arts, is devoted to the acquisition, preservation, study, and exhibition of American painting, sculpture, graphic art, and crafts. The Renwick Gallery, established in a separate building in 1972 under the purview of NMAA, displays American crafts, decorative arts and design as well as exhibitions from abroad. Also, the Barney Studio House, with a part-time curator paid from an endowment, is maintained by NMAA as a period home open for tours and for special interpretive programs. For FY 1986, an increase of 1 workyear and \$55,000 is requested to further automation efforts of the Museum. Necessary pay of \$104,000 is required for existing staff and an amount of \$47,000 is sought to compensate for the effects of infla-

tion in nonsalary areas of expense. A further amount of \$93,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - NMAA's collection represents American art from its beginnings to the present and serves as the basis for active programs of research, exhibition and public education. The recently completed inventory confirmed that there were approximately 32,000 objects in NMAA's permanent collection as of December 31, 1984, a number which continues to grow at a rate of approximately 1,000 new works each year. A portion of the permanent collection is on view to the public on a rotating basis in the Museum's galleries. The balance is in storage, available for scholarly research, or on loan to selected museums and university galleries throughout the country. Preservation and restoration of irreplaceable American art works also are important features of the Museum's mission. Scholarly research performed by the professional staff results in publications, exhibitions and educational programs which further the understanding of American art and artists throughout the country.

NMAA's reference materials are used by both lay and scholarly researchers from a wide variety of disciplines. Unique among these resources are three art indices: the Inventory of American Paintings Executed Before 1914; the Smithsonian Art Index, which lists art works currently housed in the Institution's nonart museums; and the Index of Pre-1877 American Art Exhibition Catalogues, which documents artistic activities in early regional centers of this country and Canada. Taken together, these indices comprise more than 500,000 computer entries, which constitute the most complete data base on the subject of American art in existence.

Collections - During FY 1983 and FY 1984, the permanent collection has been augmented by acquisitions in previously unrepresented areas and strengthened in areas for which NMAA is noted. The Museum was pleased to accept the transfer of over 1,700 contemporary photographs from the National Endowment for the Arts (NEA). These photographs provide the nucleus of NMAA's new photography collection and include works by most major living American photographers. This collection is being expanded through gifts and purchases.

Notable recent additions to the Museum's collection of paintings have included "The Subsiding of the Waters of the Deluge," by Thomas Cole; a fine early portrait by Thomas Sully of David La Motte; 17 objects--including prints, paintings, and sculptures--from the estate of the Surrealist master Man Ray; a watercolor, "Babe La Tour," by Stuart Davis; and the 1851 painting "Miners in the Sierra" by Charles Nahl and August Wenderoth. NMAA's collection of Afro-American art has been strengthened by the transfer of over 200 works from the National Museum of African Art. Several major works by American artists in the crafts media also were added to the collection, most notably "Rocking Pot," a pivotal stoneware sculpture by Peter Voulkos.

In FY 1985 and FY 1986, particular attention will be placed on strengthening the photography collection. With the nucleus of a fine collection provided by NEA, the Museum is in a position to build a significant holding worthy of national recognition. The Museum also will continue to seek paintings, sculptures, graphics and crafts which will fill major gaps and will broaden the existing collection.

The preservation, management and security of the collections remain intrinsic parts of the Museum's overall collection program. During FY 1983 and FY 1984, over 700 objects received conservation treatment. Conservation will continue to be an area of particular concern.

Research - During FY 1983 and FY 1984, scholarly research by the professional staff resulted in 23 publications, 27 exhibitions and numerous educational programs. Signifi-



cant publications which accompanied temporary exhibitions include: "Jose de Creeft: Sculpture and Drawings"; "Provincetown Painters: A Woodcut Tradition"; "The Capital Image: Painters in Washington, 1800-1915"; and "Exposed and Developed: Photography Sponsored by the National Endowment for the Arts." Another publication, the "Descriptive Catalogue of Painting and Sculpture in the National Museum of American Art," documents over 5,000 works in the Museum's permanent collection for the use of scholars, curators, students, collectors and the general public.

NMAA also has recorded achievements in fulfilling its role as a research center for the study of American visual arts. The Museum has added over 10,000 slides and over 10,000 prints to its slide and photographic archives. Preservation of the Museum's collection of nitrate negatives taken by Peter A. Juley, the noted photographer of works by American artists, is proceeding, with over 16,000 negatives converted to stable film in FY 1983 and FY 1984. The Inventory of American Paintings Executed Before 1914 continues to serve more researchers than any other automated resource, with over 1,100 queries annually; roughly 16,000 entries were added to the Inventory data base during FY 1983 and FY 1984.

In FY 1985, NMAA will launch a grant-funded pilot project for a national inventory of American sculpture which will index on computer all sculpture produced by an American or in America through 1950. Simultaneous to the collection of data to locate sculpture, will be the gathering of pertinent data to extend the Inventory of American Paintings through 1950.

Exhibitions - NMAA emphasizes in its exhibition program reexamination of works by American artists, both familiar and neglected, and regional aspects of American art. The Renwick Gallery provides opportunities for exhibition of works by American craftsmen and for the presentation of new concepts, approaches and techniques in the crafts media. Approximately 20 temporary exhibitions--not including rearrangements within the permanent collection galleries--open at NMAA and the Renwick each year. With each major exhibition organized by NMAA, a substantial catalogue or publication is produced. When the exhibitions are of important national or regional interest, they are offered on tour to other museums. During FY 1984, the Museum circulated four such exhibitions to ten museums in the United States.

During FY 1984, NMAA completed its most ambitious installation project ever, the first comprehensive rehang and refurbishment of galleries since the Museum's move to the Old Patent Office Building in 1968. Necessitated by the exponential growth of the collection since 1968 and the focus on American Art, as reflected in the Museum's present name, NMAA paintings and sculpture now are presented in a chronological and coherent arrangement, enabling visitors easily to appreciate the rich development of American Art. The reinstallation also enables a larger number of works from the permanent collection to be on public view.

Temporary exhibitions drawn from the permanent collection also have become an important aspect of NMAA's program. Emphasis on temporary exhibitions will shift in future years from numerous, constantly changing, small exhibitions to fewer, higher quality major exhibitions. These major exhibitions will examine the work of individual American artists such as Man Ray, or explore thematic topics, such as the art of Taos and Santa Fe. Use of the permanent collection will continue to be of fundamental importance in planning temporary exhibitions.

Interpretive Programs - The Museum presents scholarly programs coincident with current exhibitions, such as the day-long symposium "Wonderland: Joseph Cornell's Adventures in the Arts, Humanities and Sciences," as well as a diversity of educational activities such as lectures, plays, films and concerts which complement exhibitions and enrich the learning experience of the Museum's visitors. Other activities, such as the

annual program of "Evenings at Barney Studio House," provide opportunities for interested people to gain insight into other aspects of Washington's early cultural life. During FY 1985, the Museum will present a national program in conjunction with Black History Month, which will emphasize the visual arts, as well as dance, music, theater, film and literature.

In addition to providing a broad spectrum of educational programs for the scholarly community and the general public, NMAA has assumed a national, as well as local role in the fostering of art education. In January 1984, NMAA published a study guide based on ten works selected from the permanent collection that will be used by teachers and students in 400 high schools throughout the country. In addition to local thematic educational programs such as those commemorating Black History Month, the Museum in 1985, with grant aid, will undertake research and development for a far-reaching national program which presents Afro-American contributions to the country's broad cultural heritage.

#### EXPLANATION OF PROGRAM INCREASE:

Automation (1 workyear and \$55,000) - For FY 1986, a \$55,000 increase over NMAA's base for automation of \$71,000 is requested to permit NMAA to integrate its existing small office automation systems; establish and sustain community data bases within NMAA; coordinate data applications; support data entry for its six art research computer projects; and telecommunicate with the Institution-wide network systems (Smithsonian Institution Bibliographic Information System, Collection Information System, and Management Information System).

Since 1983, NMAA has acquired piecemeal, through internal reprogramming, three small office automation systems which are distributed in the Curatorial, Resources, and Programs divisions of the Museum. The systems currently support a total of seven workstations. Over 60 users, representing every office of the Museum, currently share these workstations. Many of NMAA's applications have undergone conversion to automation, including facets of loan registration, accession procedures, exhibition and manuscript preparation, and data entry for the Museum's six art research computer projects which reside on the Institution's mainframe computer. The Museum staff's rapidly growing demand for automation applications, a demand accelerated by the success of the present systems and the increasing sophistication of its users, already far exceeds the resources of these small systems.

Approximately \$71,000 of the Museum's base currently is devoted to automation, covering annual Office of Information Resource Management (OIRM) reimbursement for central computer services, personnel for automation of art research data bases, and supplies for the distributed office automation system. NMAA currently does not have a base allotment for acquisition of computer equipment.

In FY 1985, NMAA received a sum of \$25,000 to hire a data clerk to work on standardizing bibliographic information in the Museum's art data bases; the two percent funding cut instituted in FY 1985 eliminated the Museum's ability to support this position. Restoration of the two percent reduction in FY 1986 would permit hiring for this position.

Of the requested FY 1986 increase of \$55,000, \$34,000 would permit purchase of a central processing unit and disk drive capable of supporting and integrating the Museum's current workstations and projected peripheral equipment. The central processing unit and disk drive recommended by OIRM for NMAA's automation needs has the capability of supporting up to 48 peripheral devices (30 workstations and 18 printers). The remaining \$21,000 and 1 workyear would cover costs for a systems administrator/operator who would oversee and direct the Museum's automation program.

In FY 1987 and following years, this expanded automation base would allow the establishment of a five-year replacement cycle for computer systems; support for training personnel to manage systems; funding for miscellaneous expenses such as maintenance fees and telecommunications costs; and subscription fees to art research and bibliographic data bases.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from a variety of different sources, including the Museum's share of sales in the restaurant and museum shop; allotments for special purposes; royalties from publications; sales of slides and photographs; honoraria received by staff while on official duty; participation fees from museums to which NMAA exhibitions are lent; and tuition reimbursement from universities for NMAA interns. Funds are used for the support of publications, exhibitions and public programs; curatorial research and travel; stipends for summer interns; purchase of photographic supplies; travel costs for meetings of the NMAA Commission; repairs to Barney Studio House; and special events for the opening of new exhibitions. Starting in FY 1984, through an agreement with the J. Paul Getty Center for the History of Art and the Humanities, Special Purpose funds are used to continue the preservation project of the Juley Collection until its anticipated completion in FY 1989 (estimated expenditures of \$70,000 in FY 1985 and \$76,000 in FY 1986).

Restricted Funds - These funds are contributed for specific purposes in the form of gifts and grants from individuals, foundations or corporations. Funds are available to support curatorial and programmatic activities of the Barney Studio House (expenditures of approximately \$35,000 annually). With support from the Robert Tyler Davis bequest, prints and drawings continue to be purchased for the permanent collection (estimated expenditures of \$10,000 in FY 1985 and in FY 1986). Other significant uses of restricted grants and gifts are for the support of publications--such as The Graphic Art of Mary Cassatt and Sculpture and the Federal Triangle--and for the support of programs, videotapes and other activities of specific exhibitions, including "The Capital Image: Painters in Washington, 1800-1915"; "Sawtooths and Other Ranges of Imagination: Contemporary Art from Idaho"; and "Woodworks: Constructions by Robert Indiana." In FY 1985, funds are provided to refurbish the Doris M. Magowan Portrait Miniature Gallery (estimated expenditures of \$52,000) and for portrait miniature acquisitions (estimated expenditures of \$13,000). In FY 1984, funds were used to purchase the 1926 painting "Callers" by Walter Ufer (\$300,000).

NATIONAL PORTRAIT GALLERY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General FTP**	Amount	Special Purpose FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1984 Actual	81	3,216	-	17	3	807	-	775	-	-
FY 1985 Base	82	3,386	-	18	1	96	-	239	-	-
FY 1986 Estimate	82	3,620	-	19	-	57	-	117	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	82	0	82
11 Personnel Compensation.....	2,084	86	2,170
12 Personnel Benefits.....	263	9	272
21 Travel.....	22	-	22
22 Transportation of Things.....	112	-	112
23 Rent, Communications & Utilities....	21	-	21
24 Printing & Reproduction.....	105	24	129
25 Other Services.....	203	48	251
26 Supplies & Materials.....	150	36	186
31 Equipment.....	63	31	94
Collections Acquisition.....	363	-	363
Total	<u>3,386</u>	<u>234</u>	<u>3,620</u>

Analysis of Increase

Necessary Pay.....	86
Inflation.....	41
Restoration of FY 1985 2% Reduction....	67
Program Funds.....	40

ABSTRACT - The National Portrait Gallery (NPG) was established by Act of Congress in 1962 (20 U.S.C. 75b) as a museum for the exhibition and study of portraits depicting men and women who have made significant contributions to the history, development and culture of the people of the United States, and of the artists who created such portraiture. For FY 1986, an increase of \$40,000 is sought to establish a base for needed automation improvements. Necessary pay of \$86,000 is required for existing staff and an amount of \$41,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$67,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The arts of portraiture and biography are the means through which the Gallery offers a continuing exploration of the American people's heritage and accomplishments. The Gallery opened in 1968, and collects, studies, preserves and exhibits portraits in all media as both historical and artistic documents.

The growth of such a collection imposes continuing responsibilities for thorough research and careful conservation of the objects acquired. Research results are published by curators and historians in articles, monographs and exhibition catalogues. The collections are exhibited continuously in a series of galleries arranged both chronologically and thematically, and are cared for by professional conservators on the Gallery's staff. The Gallery also organizes a schedule of popular and scholarly temporary exhibitions on a wide variety of subjects. Each is accompanied by an illustrated catalogue and usually incorporates materials borrowed from museums throughout the country and abroad.

Collections - In FY 1984, the Gallery was fortunate to purchase approximately 100 works of paintings, sculpture, drawings, photography and printmaking, and to acquire more than 200 works by donation. Among the major purchases were a portrait of American artist Mary Cassatt by Edgar Degas; a portrait of President Jimmy Carter by Robert Templeton; a rare portrait of the poet Joel Barlow by Robert Fulton, who was an artist as well as inventor and scientist; a painting of the noted critic Sadakichi Hartmann by the Michigan artist John S. Coppin; a rare 1860 lithograph of President Abraham Lincoln by Joseph E. Baker; a photograph of the American publisher James Thomas Fields by the noted British photographer Julia Margaret Cameron; and photographs of Sherwood Anderson, George Washington Carver, W. C. Handy and Frances Benjamin Johnston.

Gifts to the Portrait Gallery included portraits of the inventor and businessman, King C. Gillette; naturalist William T. Hornaday; civil rights activist Rosa Parks; economists Thornstein Veblen and Milton Friedman; and a substantial group of caricatures by Aline Fruhauf of noted Americans in the fields of music, the arts and fashion.

Exhibitions - The Gallery's exhibition program continues to expand in scope and to attract new audiences. Two exhibitions opened simultaneously at the Gallery in February 1984. The first was "Artists by Themselves: Artists' Portraits from the National Academy of Design," a pictorial "Who's Who in American Art," which brought together 72 portraits from the National Academy of Design's collection of more than 1,300 artists' portraits. Appropriately, NPG was the first stop for this traveling exhibition. The other exhibition that opened in February was "Arnold Genthe: The Celebrity Portraits," created by the Library of Congress from its Genthe Collection. Arnold Genthe, a turn-of-the-century photographer, gained an enviable reputation as a photographer of celebrities. The exhibition contained 50 photographs of famous personalities, among them Tallullah Bankhead, Pearl Buck, John D. Rockefeller, Greta Garbo, Somerset Maugham, Sonja Henie and Frank Lloyd Wright.

In commemoration of the 200th anniversary of the beginning of trade between America and China, "'Adventurous Pursuits': Americans and the China Trade, 1784-1844," opened in March 1984. Through portraits of the entrepreneurs, missionaries, diplomats, and their Chinese counterparts, and through associated memorabilia, the exhibition examines the first epoch in Sino-American relations. The exhibition is accompanied by a comprehensive, illustrated catalogue.

A retrospective exhibition "Erastus Salisbury Field, 1805-1900," the first comprehensive exhibition of this American Folk artist and student of Samuel F. B. Morse, opened in June 1984 as the first joint exhibition ever held at the National Portrait Gallery and the National Museum of American Art. Field is known especially for his portraits of sitters from the Connecticut Valley, his genre paintings and paintings of historical events. The National Portrait Gallery exhibition contains 73 of Field's portraits painted from

1825 to the 1850s when Field turned to painting large, often allegorical, pieces on historical and religious themes. Many of these history paintings are displayed in the National Museum of American Art exhibition.

Exhibitions being planned for FY 1985 include shows on the artists Miguel Covarrubias, Joseph Wright, Chester Harding and William Edward West, as well as exhibitions on Indian peace medals, and a commemorative exhibition on Ulysses S. Grant. Planned for FY 1986 are shows on the artists John Frazee and Gaston Lachaise; the American career of the writer D. H. Lawrence; and an exhibition on American radio and television. As usual, major publications will accompany these exhibitions.

Publications - In addition to the Gallery's heavy publications work load associated with its exhibition schedule, the National Portrait Gallery has published two major scholarly works in FY 1984: (1) American Portrait Prints, the proceedings of the Tenth Annual American Print Conference held at NPG; and (2) the first volume of the seven- or eight-volume letterpress edition of The Selected Papers of Charles Willson Peale and His Family.

Copy-editing is under way on a definitive catalogue of The Portrait Engravings of C.B.J.F. de Saint-Memin. Also in preparation is the manuscript for the next edition of the Gallery's Illustrated Checklist, an invaluable reference guide to the permanent collections. The Gallery now produces four handsome calendars of events per year to announce its activities to the community and the Nation.

Education - The National Portrait Gallery's public education program continues to combine an active schedule of docent-led tours seven days a week, an intensive program of education aide training in cooperation with local universities, and an active outreach program which brings the drama of American history--in compelling productions of such themes as the trial of John Brown--to school groups, senior citizens and the disabled.

The Education Department also has continued to provide its highly popular "Portraits in Motion" (biographical dramatic presentations) both in numerous free performances and through the recent establishment of a very well subscribed series of "Portraits in Motion Showcases" in cooperation with the Smithsonian Resident Associate Program.

The Gallery also has revitalized its "Living Self-Portrait" series in which notable and venerable Americans of achievement bring to invited audiences the recollections of their productive lives. These occasions are videotaped for archival and programmatic purposes. A pilot program of the "Evening with George Abbott," produced with Smithsonian Outreach funds, was completed for consideration by public television.

Research - In FY 1984, the library, shared by the National Museum of American Art and the National Portrait Gallery, launched its automation program. In order to improve its reference service, the library now can provide access to two national bibliographic electronic data bases, as well as to an information retrieval service. As the Smithsonian Libraries develops its own automated bibliographic system, the shared library will need to expand its data processing so that acquisitions and cataloguing will be compatible with the Smithsonian Libraries.

The National Portrait Gallery continues to add listings to The Catalog of American Portraits, a large and growing source of information on portraiture for scholars of American history, art history and biography. In FY 1984, field researchers examined collections in Texas, Oklahoma and New Mexico, and the project yielded approximately 2,083 records from 21 institutions and 43 private collections to be integrated with the existing data base of more than 35,800 records. Computer-generated printouts of collections already canvassed have been placed with over 250 individual institutions. States yet to be surveyed include Washington, Oregon, Idaho, Nevada, Montana, Utah, Wyoming,

Colorado, Kansas, North Dakota, South Dakota, Nebraska, Alaska, Hawaii, Missouri and Arkansas. When completed, The Catalog of American Portraits should contain more than 100,000 entries.

EXPLANATION OF PROGRAM INCREASE:

Automation (\$40,000) - For FY 1986, an increase of \$40,000 is requested to establish a base for automation equipment purchase and subsequent maintenance, enhancement, and later replacement of five computer terminals and printers (\$21,000), software (\$4,000), furniture (\$6,000), supplies (\$3,000), maintenance contracts (\$3,000) and training (\$3,000). Currently there are no allocated base funds for automation at the National Portrait Gallery.

The Museum first acquired its limited automation equipment in FY 1982 when the Charles Willson Peale Papers project leased and then purchased a word processor with internally reprogrammed funds. A year later, a second word processor was leased and then purchased to assist with the heavy editing work load of the Peale Papers project. In FY 1984, four personal computers and four printers were purchased, again with internally reprogrammed funds, for the Gallery's Administrative Office, Office of the Registrar, and The Catalog of American Portraits. (It is not likely that similar reprogramming will be feasible in the future.) Prior to the purchase of these computers, the Catalog, a referencing data base containing more than 37,000 records of American portraiture nationwide, relied on the antiquated method of transcribing printed information to computer legible tapes for transfer into the data base housed in the Smithsonian's central computer system. In addition to an anticipated reduction in transcription errors, the new equipment allows, for the first time, on-line access to the Catalog's data base (previous access has been through time-dated computer printouts) in a variety of formats. Although the current personal computer systems are not yet wired together into a network, future plans call for integration of all of the Gallery's systems.

Increasing demands for automation applications by the small Gallery staff far exceed the resources available by the six units currently installed. The FY 1986 request for \$40,000 is for the purchase of five additional personal computers and printers for the Departments of Education, History, Exhibit Design and Production, and the Publications Office. The functions of these offices are closely related and frequently require the exchange or use of like information (e.g., collections information is used by Education to prepare public programming; by History for catalogue and exhibition preparation and research; by Exhibit Design and Production for exhibition labels, exhibition planning, and layout; and by Publications for editing labels, manuscripts, etc.). Direct, immediate and simultaneous access to information by these offices and those outfitted in FY 1984 will increase greatly the efficiency of the Gallery. In FY 1987 and following years, this base funding would provide for the further expansion of the system throughout the Gallery, the acquisition of software packages, and maintenance costs of the system.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from several sources including: the Gallery's share of sales in the restaurant and museum shop; sales of photographic reproductions of portraits in the collection; staff honoraria; and participation fees from museums to which NPG exhibitions are loaned. These funds are used to help defray the expenses of public lectures, symposia and special events in coordination with the opening of exhibitions; associated costs of loan exhibition development and management; and for research expenses of staff who are preparing special publications or lectures. Funds provided by allotment also will be used to provide partial support for the The Catalog of American Portraits' nationwide survey program. In FY 1984, funds from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach

from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program were used to purchase the Mary Cassatt portrait by Edgar Degas (\$650,000) and to develop a video pilot for a series of interviews with distinguished older Americans (\$30,000).

Restricted Funds - These funds are provided for specific purposes in the form of gifts and grants from individuals, foundations, organizations or corporations. The Catalog of American Portraits is currently in the sixth year of a seven-year nationwide survey of American portraits. A grant of funds (\$325,000) from the Andrew W. Mellon Foundation in 1977 made possible the implementation and continued operation of this extremely important project.

The Morris and Gwendolyn Cafritz Foundation provided a matching grant (\$650,000) to purchase the portrait of Mary Cassatt by Edgar Degas. The Jimmy Carter Inaugural Committee provided \$15,000, the major portion of the \$20,000 needed to purchase the portrait of President Jimmy Carter by Robert Templeton. Funds provided by a grant from Merrill Lynch were used to publish the catalogue for "'Adventurous Pursuits': Americans and the China Trade, 1784-1844." American Portrait Prints, the proceedings of the Tenth Annual American Print Conference, was published with the support of a matching grant from the Barra Foundation. NPG has received \$15,000 from Paul Mellon and is requesting a further \$10,000 from the Barra Foundation in partial support for the production of a definitive catalogue of The Portrait Engravings of C.B.J.F. de Saint-Memin, to be published by the Smithsonian Institution Press.



HIRSHHORN MUSEUM AND SCULPTURE GARDEN

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds			
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	75	2,851	-	9	-	73	-	11	-	-
FY 1985 Base	77	3,016	-	12	-	175	-	719	-	-
FY 1986 Estimate	77	3,229	-	12	-	45	-	60	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	77	0	77
11 Personnel Compensation.....	1,906	123	2,029
12 Personnel Benefits.....	191	8	199
21 Travel.....	31	2	33
22 Transportation of Things.....	205	5	210
23 Rent, Communications & Utilities....	5	2	7
24 Printing & Reproduction.....	95	3	98
25 Other Services.....	200	10	210
26 Supplies & Materials.....	168	20	188
31 Equipment.....	59	40	99
Collections Acquisition.....	150	-	150
41 Grants.....	6	-	6
Total	<u>3,016</u>	<u>213</u>	<u>3,229</u>

Analysis of Increase

Necessary Pay.....	71
Inflation.....	37
Restoration of FY 1985 2% Reduction....	60
Program Needs.....	45

ABSTRACT - The Hirshhorn Museum and Sculpture Garden (HMSG) was established by an Act of Congress (P.L. 89-788, November 7, 1966) and opened to the public on October 4, 1974. Its collection of art, soon to number more than 13,500 works, forms the basis of an active program of public exhibitions. The Museum also prepares catalogues relating to its collection and exhibitions, conducts extensive research and presents a wide range of educational activities including film programs, lectures, concerts, publications and tours. For FY 1986, an increase of \$45,000 is requested for automation. Necessary pay of \$71,000 is required for existing staff and an amount of \$37,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A

further amount of \$60,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - In October 1984, the Hirshhorn Museum and Sculpture Garden celebrated its tenth anniversary. As one of the major museums of modern and contemporary art in the United States, HMSG operates an active program of research, exhibitions, acquisitions, collections management, and related programs of lectures, films, concerts and educational activities involving audiences of all ages.

Research - The Museum's resources include works of art, a curatorial file providing information on artists and works in the collection, and a library with 6,000 volumes. Approximately 700 works are on display at any one time in the Museum. Works not currently on exhibition are available for study to scholars and students by appointment. In coordination with the Office of Information Resource Management's Institution-wide automation plans, HMSG's data base will be placed on a new system that ultimately will allow researchers and the public to retrieve information on-line from computer terminals. The feasibility of producing a video disc publication of the entire collection is being explored currently. This would permit a high quality visual image of any object in the collection to be made available in approximately four seconds. Working with the Smithsonian Office of Printing and Photographic Services, a trial video disc containing 100 images from the Museum was produced in FY 1984.

Exhibitions - The Museum conducts an active exhibition program that draws upon works in its own collections, as well as other collections. Major exhibitions shown in FY 1984 were: "Dreams and Nightmares: Utopian Visions in Modern Art," which included 136 works by 62 American and European artists of the twentieth century; "Drawings 1974-1984," which was the first of a two-part celebration of the Museum's opening; "German Expressionist Sculpture" (organized by the Los Angeles County Museum of Art); and "Artistic Collaborations in the Twentieth Century." In FY 1985, the following are among the major shows scheduled: "Jim Dine: Five Themes" (organized by the Walker Art Center); "Representation Abroad: Diversity"; and "Contemporary Italian Mysticism." The exhibition, "Content: A Contemporary Focus, 1974-1984," October 1984 to January 1985, was the second part of the tenth anniversary celebration of the first ten years of the Hirshhorn Museum. Nearly two hundred American and European works were exhibited in the show which was organized as a unified overview of art of this decade.

Approximately 85 docents, trained by the Museum, give general tours covering the Museum's permanent collection and special tours of major exhibitions. These tours are supplemented by ones offered by the staff of the Education Department for special exhibitions.

The Museum has organized a number of exhibitions drawn from its permanent collection that are toured by the Smithsonian Institution Traveling Exhibition Service (SITES) and by the Museum. Recent exhibitions toured by SITES are: "Raphael Soyer: 65 Years of Printmaking"; "Genre Scenes"; "Artists and Models"; and "Aspects of Color." Recent exhibitions circulated by the Museum include "Joseph Stella"; "Sculpture from the Hirshhorn Museum"; and "Oscar Bluemner." As HMSG's permanent holdings become better known, they are sought as loans for exhibitions by other museums. In FY 1984, the Hirshhorn lent 273 objects to nearly 70 institutions. Among the works loaned were 11 paintings and drawings to the Alexandria Museum of Visual Art, Alexandria, Louisiana; eight paintings to the Hillwood Art Gallery, C.W. Post College, Greenvale, New York; seven paintings to the Tampa Museum, Tampa, Florida; six paintings to the Mansfield Art Center, Mansfield, Ohio; and four sculptures by Henry Moore to the Metropolitan Museum of Art, New York.

A sampling of loans to foreign exhibitors includes ten paintings to the Akademie der Kunst, Berlin, West Germany, for a Willem de Kooning retrospective; five large sculptures for an inaugural exhibition at the Museum of Modern Art, Shiga, Japan; two paintings by Max Beckmann to the Museen der Stadt, Cologne, West Germany; and a painting and a drawing by Ben Shahn to the Ministry of Culture, Madrid, Spain.

Development of the Collection - The legislation establishing HMSG (P.L. 89-788) described its function as a "museum in Washington, D.C. where modern art could be exhibited and studied...(which)...would enrich the culture of the Nation." In order to carry out this mandate, it is essential that HMSG's collection always include contemporary art and that the Museum keep abreast of current developments in the visual arts. To present an accurate account of esthetic developments on an international level, an active acquisitions program is essential. Ten objects were donated in FY 1984, and the Museum was able to add nine works of art through purchase with appropriated funds, including a painting by Avigdor Arikha, "The Square in June"; and a drawing, "Three Mile Island, Night," by Yvonne Jacquette. During FY 1986, HMSG expects to accession the 6,000 objects from the bequest of the late Joseph Hirshhorn into its permanent collection.

Collections Management - The Museum inventories its entire collection on a three-year cycle with spot checks made at least annually. Starting in FY 1982 and continuing through FY 1984, there was a major effort to complete photographing the permanent collection. In FY 1984, catalogue worksheets were completed for all of the works on paper and work was under way to preserve, and where necessary conserve, the sculpture collection. In FY 1985, conservation on the outdoor sculpture began, with funding appropriated in FY 1985 for this purpose.

Education and Public Orientation - To increase visitor appreciation and understanding of specific exhibitions and of modern art in general, the Museum provides visitors with a variety of educational materials, including explanatory wall labels and brochures. The latter range from a single page to illustrated mini-catalogues and are distributed free of charge to the public. In a small theater on HMSG's third floor, a slide lecture program enhanced by the installation of original works of art in a nearby gallery is presented three times an hour. During the "German Expressionist Sculpture" exhibition, a related slide program produced by the Los Angeles County Museum of Art was presented. The Museum also produces its own slide lectures, including "Elements of Art: Color," the second in a series.

The Hirshhorn encourages visitation through its outreach program. Several film series are conducted including a lunchtime series about artists and their work, an evening series of films by artist filmmakers, and a Saturday film series for young people. Events held in the auditorium include concerts by the 20th Century Consort and lectures by artists, critics and art historians. Also, symposia are organized occasionally in connection with exhibitions.

#### EXPLANATION OF PROGRAM INCREASE:

Automation (\$45,000) - An increase of \$45,000 is requested in FY 1986 to purchase computer equipment, software and to provide funds for necessary staff training. The Museum presently has no base funds devoted to automation, since a major portion of its base resources has been devoted to collections management, acquisitions and exhibitions. Inventorying and researching objects in the Hirshhorn bequest and the Museum's permanent collections, which consists of over 13,500 objects, has accelerated the need for automation of the Museum's collections management and research activities. Computerization of research and inventory information would facilitate continuing research on the Museum's permanent collection as material is added and revised. Likewise, activities in the Museum's library have reached a point where computers are necessary to expedite bibliographic research, title searches and card catalogue information. Computerization

of these activities would allow the Museum to be connected to major resource data banks such as Research Libraries Information Network, which provides access to books and catalogues in other art libraries and DIALOG, which provides access to more than 100 million items of information, including reference books, directories, journals and newspapers. The computers will be connected to the Smithsonian Institution central computer system to allow access to the Institution's accounting, personnel and supply offices.

The proposed increase is sought to purchase four personal computers and four printers (\$35,000); supplies and materials (\$5,000); computer time (\$2,000); and training (\$3,000). In FY 1986 and FY 1987, the funds will be used for equipment, software, installation costs, supplies, computer time on the central computer and training. Beyond FY 1987, the funds will be used to maintain and operate the system.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided from several sources including the Museum's share of sales in the museum shop and plaza cafe, and from other receipts such as fountain coins. In FY 1984, allotments partially supported the exhibition, "Content: A Contemporary Focus, 1974-1984," for the tenth anniversary of the Museum (estimated expenditures of \$130,000 in FY 1985) and travel expenses of the Museum's Board of Trustees.

Restricted Funds - In FY 1984, the Women's Committee of the Smithsonian National Associate Program funded a slide program on the "Conservation of Works of Art." The Museum has raised outside support from various sources to help acquire costly and important major works for the permanent collection (estimated expenditures of \$696,000 in FY 1985 and \$37,000 in FY 1986).

CENTER FOR ASIAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
		FTP**	Amount	FTP**	Amount					
FY 1984 Actual	30	1,058	1	50	-	37	21	1,497	-	-
FY 1985 Base	38	1,602	1	62	-	3	21	1,485	-	-
FY 1986 Estimate	46	3,368	1	67	-	3	21	1,555	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	38	8	46
11 Personnel Compensation.....	910	212	1,122
12 Personnel Benefits.....	114	26	140
21 Travel.....	5	18	23
23 Rent, Communications & Utilities....	68	-	68
24 Printing & Reproduction.....	72	88	160
25 Other Services.....	81	546	627
26 Supplies & Materials.....	153	491	644
31 Equipment.....	99	185	284
Collections Acquisition.....	100	200	300
Total	<u>1,602</u>	<u>1,766</u>	<u>3,368</u>

Analysis of Increase

Necessary Pay.....	38
Inflation.....	24
Restoration of FY 1985 2% Reduction....	32
Program Funds.....	1,672

ABSTRACT - The Center for Asian Art is comprised of the Freer Gallery of Art, established May 5, 1906, and the Arthur M. Sackler Gallery, established July 28, 1982. Both galleries are devoted to the acquisition, study, conservation, interpretation and exhibition of Asian art. The Sackler Gallery will have an exhibition program that includes temporary loan exhibitions to and from other organizations that is not possible at the Freer due to the restrictions of the founder's will. The Freer Gallery of Art has a continuing program to display its collections as keys to understanding the civilizations that produced them. For FY 1986, an increase of 8 workyears and \$1,672,000 is requested for the Sackler Gallery, for activities to be held in the Quadrangle, including a major inaugural exhibition that will display the entire Sackler collection of 1,000 objects. Necessary pay of \$38,000 is required for existing staff and an amount of

\$24,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$32,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

### FREER GALLERY OF ART

PROGRAM - The Freer Gallery of Art houses one of the most distinguished collections of Oriental art in the world. The collection consists of over 26,800 works of art from China, Japan, Korea, India and the Near East and spans 5,000 years. Included in the collection are paintings, sculptures and other objects in stone, wood, lacquer, jade, pottery, porcelain, bronze, gold and silver; and Biblical manuscripts. "The Peacock Room" by James McNeill Whistler is a highlight of an outstanding collection of American art that Charles Lang Freer, the Gallery's founder, considered a bridge between the arts of the East and of the West. Items not currently on exhibition are available to students and scholars for study. In addition to the collections, the Gallery houses a public library of approximately 30,000 volumes relating to the objects in the collections.

The unique Oriental collections of the Freer Gallery, together with notable holdings of American paintings, have made the Museum a center for students, scholars and the general public on an increasing basis. This growing interest has been manifested in a steady increase in visitors, in requests for museum tours, lengthy periods of advance bookings for authentication appointments, and the number of visiting scholars and dignitaries.

Research - Freer Gallery research facilities, comprising the collections, curatorial staff, library and technical conservation laboratories, form the nucleus of its specialized public service. Research findings are made available to the public through exhibitions, catalogues of exhibitions, articles, free gallery leaflets and public lectures at the Freer as well as at other similar institutions. Updating the research files on individual pieces in the collection continues. These files are made available to visiting scholars and students as well as the general public.

The results of curatorial research are most visible in the Gallery's exhibitions. However, additional research results made available to the public can be found in collection research records, in lectures, and in published papers and books. Specific areas of current research in Japanese art include an ongoing study of porcelains, the study of the influences of Korean slip-glazed ceramics on Japanese ceramics and the economics of ceramic production in Edo-period Japan, with special interest in daimyo-descended kilns and Kyoto potteries. Research on late Edo-period drawings, including those by Hokusai, on Edo-period lacquer and on medieval narrative paintings, occurred in FY 1984.

In the field of Chinese art, research continued on Chinese calligraphy (in preparation for an exhibition and catalogue in FY 1986) and paintings. Results from recent archeological discoveries in the People's Republic of China contributed to new research on similar objects in the Freer. The results of this research were made available to the public through lectures at the Freer and in other museums in the United States and abroad.

The Technical Laboratory of the Freer Gallery of Art is renowned for its research activities, in addition to the ongoing conservation and restoration of objects in the collection. Research has included: lead-isotope ratios in Chinese bronzes and colors of the copper-tin-lead alloy system (both subjects of papers presented at the Archaeometry Conference in Washington, D.C., in May 1984), lead-isotope ratios in Oriental pigments, and examination and analysis of Islamic metalwork in the collection for the catalogue of the exhibition scheduled for FY 1985. Technical research including the completion of the survey of pigments on Japanese Ukiyo-e paintings in the Freer is being reviewed for publication. The Technical Laboratory will continue infrared photography on American

pastels, research on bronzes and lead-isotope ratios, identification of certain unidentified green pigments on Japanese paintings and studies on Chinese ink samples.

Conservation - In FY 1984, 143 objects in various media (e.g., ceramics, wood, lacquer and metal) including Persian and Indian miniatures, were examined, treated and made ready for exhibit and 112 objects were examined for possible purchase. A large group of works of art by James McNeill Whistler were treated so they could be included in a major exhibition which opened in May 1984. This included many drawings and pastels as well as 17 wooden dado panels from the stairway outside the Peacock Room in its original London setting. The panels had never before been exhibited in the Freer and required treatment to render them structurally sound. General conservation work will continue and be broadened to include examination and treatment of objects from the Arthur M. Sackler collection.

Exhibitions - Japanese exhibitions in the past year included "Korean Influences in Japanese Ceramics," which exhibited 50 objects from the Freer's ceramic collection. This exhibit examined the enduring appeal in Japan of Punch'ong ware, Korean ceramics that entered Japan in the 16th century. The exhibition presented several Korean prototypes from the Yi Dynasty (1392-1910). It also focused on Japanese ceramics from the Momoyama (1568-1615) and Edo (1615-1868) periods that featured several Korean techniques of applying slip to dark-bodied wares. These techniques became major elements in the styles of the western Japanese ceramic centers founded by Korean potters. They also were evidenced elsewhere in Japan.

"Japanese Drawings" included the preliminary drawings that Katsushika Hokusai (1760-1849) made for a partially published series of woodblock prints. Some 35 brush and ink drawings by 19th-century artists were featured in this exhibition. The works by Hokusai illustrate the extraordinary care with which this master prepared his print designs. Also included, were drawings by Gyosai (1831-1889) and others.

"Japanese Fans" included painted fans of high artistic quality produced by some of Japan's most famous painters, as well as by workshops where fan painting was an important means of livelihood. This exhibition included Japanese fans of both folding and circular shapes, some mounted on folding screens or scrolls or serving as decorative motifs for screens, ceramics, or lacquer. Fans decorated by well-known Japanese painters included a folding fan with an ink landscape by the 16th-century painter Sesson and a circular fan with paintings in color by Korin (1658-1716). This exhibition was held in conjunction with the major fan exhibition held in the Renwick Gallery.

Another Japanese exhibition was titled "Autumn Colors" and included a selection of paintings, lacquer and ceramics decorated with autumn themes. "Kyoto Ceramics" presents the work of the major Kyoto ceramic artists as well as of representative Kyoto pottery workshops of the Edo period (1615-1868). Japanese exhibitions planned for FY 1985 include "Japanese Calligraphy," "Japanese Screens of Famous Places," and "The Glazed Ceramic Tradition of Seto and Mino Wares."

In "Chinese Paintings," a selection of 30 paintings spanning the Sung dynasty (960-1279) through the Ch'ing dynasty (1644-1912) was exhibited. This exhibition included two recently accessioned works by Shih-t'ao (Tao-chi), a 17th-century painter with a wide reputation in the West. Shih-t'ao was a member of the imperial family that ruled during the Ming dynasty. He retreated to a monastery and took up painting following the Manchu conquest in 1644. Another exhibition on Chinese paintings is being planned that will feature a different aspect of Asian art.

In "The Ramayana" exhibition, 24 paintings from a 16th-century Indian manuscript tell the story of Rama, the Hindu god-man. A children's version of the story of Rama was published as the catalogue for the exhibition entitled The Adventures of Rama.

"Islamic Manuscript Illumination" exhibited 19 folios produced in Egypt, Iran, Afghanistan and Uzbekistan between the 10th and 16th centuries. This exhibition offered a look at the decoration of religious and secular manuscripts.

"Pre-Islamic Metalwork from the Near East" exhibited 24 objects in silver, gold and bronze, made in Iran and Egypt, from the 4th century B.C. to the 6th century A.D., including Sasanian Iran (224-651) and nine gold objects from Egypt.

In May 1984, a major exhibition on James McNeill Whistler marked the 150th anniversary of the painter's birth. Every Whistler painting, drawing and watercolor in the Freer Gallery (there are approximately 300) was exhibited and reproduced in an exhibition catalogue which is considered a definitive statement on the Freer's Whistler collection, one of the two largest collections of his work in the world. The Freer also holds 900 etchings and engravings by Whistler which will be exhibited at some future time.

To coincide with the nationwide celebration of Indian traditions and culture, in May 1985, there will be an exhibition entitled the "Festival of India," using Freer masterpieces of Indian art. In addition to this exhibition, a Freer Medal will be given to an outstanding scholar in the field of Indian art. The exhibition "Islamic Metalwork," September 1985, marked a four-year collaborative research effort by the Technical Laboratory and the former curator of Near Eastern art. In FY 1986, the Freer is planning a large exhibition that is tentatively entitled "Freer Masterpieces" as well as an exhibition of works by Dwight W. Tryon, an American artist well represented in the Freer collection.

Collection Acquisitions - Recent additions to the collection purchased with the Freer Gallery's nonappropriated Trust funds include Chinese wooden sculpture, painting, calligraphy, ink sticks, jade and ceramics. With the recent purchase and donation of 29 Chinese ceramics from a private American collection, the Freer's holdings in Shang and Chou dynasty ceramics are the best in the United States. Japanese paintings, ceramics, calligraphy and a Noh mask also were acquired by purchase and donation. A pair of Japanese Kamakura period wooden lion sculptures was purchased by the Freer using a Smithsonian Society contribution and Freer Trust funds. Two important Chinese paintings by Shih-t'ao were purchased using monies from the nonappropriated Regents Major Acquisitions Fund and from Freer trust funds. A sum of \$100,000 was appropriated for the first time in FY 1985 for collection acquisitions for the Freer Gallery. This money will be used to purchase Asian objects of the highest quality that are appropriate to the growth of the Freer's outstanding collection.

Education - The Freer Gallery carries out a great deal of research and scholarly activity which is made available to the public in a number of ways. As part of the Freer's education program during FY 1984, the Gallery offered seven public lectures with the general theme of connoisseurship in conjunction with the Freer's 60th anniversary in 1983. This popular lecture program continued with three lectures given in the fall of 1984 and three more scheduled for the spring of 1985. Other parts of the education program include a free introductory brochure given to the visiting public and mailed to individuals and groups who write for general information on the Freer; a free introductory brochure for the visually impaired; the continuation of the highly successful free exhibition leaflets introducing various aspects of the Gallery's collections; and the tours given by docents. In FY 1984, over 19,000 visitors joined the weekday and weekend tours given four times daily. The Freer also participated in a consortium of local universities teaching Asian art in the Washington metropolitan area.

Leaflets, pamphlets and catalogues produced by the staff in FY 1984 included a general book on the history and programs of the Freer Gallery of Art, The Adventures of Rama, and James McNeill Whistler at the Freer Gallery of Art. A Freer Gallery floor plan in Chinese was added to the Gallery's existing four in French, German, Spanish and Japanese.



A catalogue on Islamic metalwork is scheduled to be published in September 1985 which will accompany an exhibition of the same name. Educational outreach continues through a new education program currently being planned for the elderly and the young. Docents will visit institutions using slides to illuminate aspects of Asian and American art for these special groups.

#### ARTHUR M. SACKLER GALLERY

PROGRAM - The primary goal of the Sackler Gallery is the advancement of scholarly appreciation and public knowledge of Asian art. Toward this end, Dr. Arthur M. Sackler has agreed to donate, upon completion of the building, a collection of nearly 1,000 objects in the fields of Chinese, Indian, Southeast Asian, Near Eastern and Japanese art. Among the works in the collection are Chinese jades spanning a period from Neolithic times (5000 B.C.-1500 B.C.) into the 20th century; Chinese bronzes from the Shang (ca. 1523 B.C.-ca. 1028 B.C.) through the Han (206 B.C.-220 A.D.) dynasties; Chinese lacquer, Near Eastern metalwork, and sculpture from Cambodia, India and Thailand. Since the Gallery cannot receive objects until its construction is completed, temporary storage space at the Museum Support Center in Suitland, Maryland, is being used to house the new collection securely. Dr. Sackler continues to add to the collection after consultation with the director of the Center for Asian Art.

Research - Research is the fundamental focus of the Sackler Gallery, providing the basis for exhibitions, publications and collection acquisitions. The research program will involve both visiting scholars as well as an expanded curatorial staff. The Asian art history journal, "Artibus Asiae," now totally funded by the Sackler Foundation, will be housed in the Gallery. The proposed Sackler Gallery journal and various exhibition catalogues and publications will make the Gallery a major center for research publications on Asian art history. Exhibitions and lectures at the Gallery will result from specific research projects as well.

Conservation - The Sackler Gallery has the responsibility to protect and conserve the art objects under its purview. This includes the objects in the permanent collections, in loan exhibitions held in the Gallery, and in Sackler-organized traveling exhibitions. Following the long practice of the Freer Gallery, the Sackler conservation effort includes object research to understand the origination of objects and therefore better develop the proper treatment of them. Expansion of the conservation facilities in a renovated Freer building will accommodate the requirements of the Sackler programs.

An expanded Oriental painting conservation program also is being planned. The Oriental Art Restoration Studio takes a more traditional approach toward the conservation of East Asian paintings and screens than do Western conservators. Besides the work related to the Sackler collection and exhibitions, the Studio also looks forward to a future program to train Americans in order to alleviate the critical shortage in this country of persons skilled in this specialized field. The only three facilities in the United States capable of restoring and mounting rare East Asian paintings and screens are occupied fully with the works in those institutions.

Exhibitions - An extensive exhibition program is envisioned. This program will include Gallery-originated exhibitions as well as traveling exhibitions organized elsewhere. Exhibitions will be drawn from international public and private collections as well as from the Sackler collection. It is expected that many Gallery-organized exhibitions will travel to other museums and institutions. The inaugural exhibition in the new building will display the entire collection of the Sackler Gallery along with certain other major objects on loan from the collection of Dr. Sackler. Under consideration for future exhibitions are Chinese mirrors, Ordos bronzes, Chinese lacquer, Indian and Southeast Asian sculpture, Chinese garment hooks, Sasanian metalwork, Chinese furniture, Near Eastern ceramics, Far Eastern ceramics and Chinese sculpture. Research catalogues

will accompany these exhibitions. A selection has been made for the exhibits specialist for which a position and funding were approved for FY 1985. Upon arrival, the incumbent will begin the construction of prototype cases for the inaugural exhibition.

Education - In addition to scholarly publications related to particular exhibitions, an extensive publications program is planned. Under consideration is a journal that would publish scholarly articles relating to collections of the Gallery. The Gallery will attract a large number of research scholars and an active program for awarding research fellowships is anticipated. Fellowship recipients would work closely with curators on topics related to the collections.

Collection Acquisitions - The Sackler Gallery may acquire art objects in those fields of central interest to the museum, e.g., the arts of Asia in its broadest terms, from Korea to Egypt. Objects acquired for the collection in the future will be of high quality with respect to esthetic standards, cultural history and physical condition. Objects may be acquired by gift, bequest or purchase provided that they meet established acquisition criteria.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, an increase of 8 workyears (for 19 positions to be phased in during the year) and \$1,672,000 is requested for the Sackler Gallery to support the costs for exhibition preparation including: the inaugural exhibition to be held in the Quadrangle (1.5 workyears and \$1,153,000); collection acquisitions (\$200,000); collections management (3.25 workyears and \$146,000); research activities (.5 workyears and \$17,000); and education and administration (2.75 workyears and \$121,000); and automation (\$35,000).

Exhibitions (1.5 workyears and \$1,153,000) - An additional 1.5 workyears and \$1,153,000 are requested in FY 1986 to develop an exhibition design and installation staff for the Sackler Gallery (1.5 workyears and \$48,000 for partial-year funding of five positions); and to design and install exhibition space in the Gallery and prepare for the inaugural exhibition (\$1,105,000).

Of the amount sought, a sum of \$48,000 is requested for a graphics designer, a woodcrafter, a carpenter, a painter's assistant and an exhibition designer, all of whom would be hired in the latter part of FY 1986. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) The exhibition and graphic designers are needed to design exhibitions in the new Gallery. The graphics tasks will include exhibition labels, photomurals, signage, posters and information brochures. The woodcrafter, carpenter and painter's assistant initially will assist with the installation of the inaugural exhibition, and later with subsequent exhibitions.

A further amount of \$1,105,000 is sought in FY 1986 to establish an exhibitions program base budget, and to design and install the inaugural exhibition. Proposed funds of \$1,105,000 are essential to the establishment of an ongoing exhibitions program on a continuing basis in the Sackler Gallery. These monies will be used to research, organize and stage the inaugural show, scheduled to open in late spring 1987, and provide a base in future years for exhibitions for which planning must begin two or three years in advance. The total cost of the inaugural show is estimated to be \$1.5 million. In addition to the \$1,105,000 being sought for an ongoing exhibition program, further one-time expenses of \$400,000 for the inaugural exhibition are expected to be sought in FY 1987. In general, the permanent exhibitions base will support costs associated with the research, design and installation of new shows, in an orderly cyclical fashion, while the one-time costs represent the extraordinary expenses of programming all of the exhibition spaces available to the Sackler Gallery to open at the same time.

The inaugural show will take place in the more than 25,000 square feet of available exhibition space and will include the entire collection of 1,000 objects in the Sackler

collection. The total of 25,000 square feet is larger than the current exhibition space in the Freer Gallery of Art. When the construction of the Sackler Gallery is completed, the exhibition galleries will be large rooms with plaster board on the walls and barren floors. Construction of temporary walls, partitions and exhibition cases will be necessary to create appropriate exhibition spaces for the Sackler gift. The inaugural exhibition will be on display for at least nine months after the Sackler Gallery opens, and it is anticipated that over 1,000,000 visitors will see this exhibition in the first year that the Gallery is open to the public.

The proposed sum of \$1,105,000 requested for FY 1986 will be spent in the following ways: a design services contract for the exhibitions and related graphics (\$290,000); fabrication and an installation contract for the exhibition including the construction of temporary walls or gallery partitions, exhibition cases (many of which must be humidity and temperature controlled) and specialized lighting (\$230,000); supplies and materials (\$380,000); lighting and audio-visual equipment (\$110,000); labels and photomurals (\$75,000); and \$20,000 for miscellaneous services such as custom designed security features for exhibition cases.

Collection Acquisitions (\$200,000) - A sum of \$200,000 is requested for collection acquisitions. The Gallery does not have any base funds for acquisitions. The sum of \$200,000 is needed for the Gallery to expand systematically the initial collection which is deficient in four specific areas: Japanese, Korean, Indian and Islamic art. There are only two pieces of Japanese art in the current collection, and in view of the importance and prominence of Japan in the Asian art world, additional representative pieces are needed. A typical Japanese object, appropriate for the Sackler collection, might cost in excess of \$100,000. There are no Korean objects in the collection. The Indian portion is relatively small with 20 pieces of stone and bronze sculpture, and expansion is desirable. The 1985 "Festival of India" is expected to affect the demand for Indian artworks by greatly increasing their popularity. At present it is not uncommon to purchase an Indian sculpture for \$150,000, and some major sculpture costs considerably more. The Gallery plans to strengthen the Islamic collection as well.

Collections Management (3.25 workyears and \$146,000) - In FY 1986, an additional 2.75 workyears for six new positions to be phased in during the year and \$146,000 are requested. Of the amount sought, \$52,000 is needed for the six positions which consist of a photographer, a conservation technician, an assistant curator, a curatorial secretary, a registration secretary, and an oriental art restoration specialist. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) An additional .5 workyear and \$13,000 are requested for the library technician hired in FY 1985 for which .5 workyear and half-year funding were provided.

A photographer is needed to photograph the entire collection and for study and publication purposes for Sackler staff and outside scholars. The conservation technician will assist in cleaning, repairing and other preparation work of each object prior to exhibition. An inventory of the collection, in terms of current conditions and conservation requirements, will be made. This technician, trained in handling art objects, will be involved in the relocation of the collection from the Museum Support Center to the Sackler Gallery. The assistant curator will be a specialist in ancient Chinese art, particularly bronzes and jades, reflecting the emphasis of the Sackler collection and to some extent the Freer collection. This curator will assist in preliminary work on the inaugural exhibition. This work will include producing exhibition labels and maintaining the records of objects within this area of specialization in order that such information be available to scholars and the general public. A registration secretary is needed not only for the development of records for the Sackler collection but also for the additional documentation related to traveling exhibitions involving other collections beside the Sackler. An oriental art restoration specialist is needed not only to work with the objects in the Sackler collection but also to prepare objects from other collections for exhibitions.

A further sum of \$81,000 is requested for general supplies for collection management and for setting up the Oriental Art Restoration studio in the Sackler Gallery (\$65,000); related equipment (\$10,000); and travel (\$6,000).

Research (.5 workyear and \$17,000) - An additional .5 workyear for an assistant curator and a secretarial position to be hired in the last quarter of FY 1986 and \$11,000 are requested. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) In addition to personnel expenses, a sum of \$6,000 is needed for curatorial travel which also will be used by existing staff.

The Sackler Collection vastly increases the responsibilities of the present Freer Gallery curatorial staff. This is true especially in the areas of China and the Near East, where the collection holdings are particularly large and important. To maintain the level of serious research established already by the Freer and to cope at the same time with the increased activity related to the collections and exhibitions at the Sackler Gallery, an additional curatorial position and a secretary are needed.

The assistant curator is expected to have particular expertise in ancient Near Eastern art history and to engage in research projects related to the ancient Near Eastern objects in the Sackler collection. While research on the collection for the inaugural exhibition catalogue is under way, Dr. Sackler continues to add to the Sackler Gallery collection in this area. Thus, a research project on ancient Near Eastern sculpture would exemplify the efforts in this area. This specialist will complement the expertise of the Freer curator who specializes in Islamic art.

Education and Administration (2.75 workyears and \$121,000) - For education and administration 2.75 workyears and \$121,000 are sought. Of this amount, \$72,000 is for part-year funding of six new positions: a public affairs specialist, an editor, an education specialist, a library aide, a technician and a secretary. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) The public affairs specialist is required to prepare for the inaugural exhibition and subsequent museum programs. An editor will prepare catalogues, gallery leaflets, and scholarly journals for exhibitions subsequent to the opening. An education specialist will expand the existing Freer docent program and develop a children's workshop as well as links with local schools and universities. A library aide will help organize the library for the opening to the public. Also required for the administrative office are the services of a technician and a secretary, who will assist in preparing documents for the numerous program and exhibition installation activities. A sum of \$37,000 is sought for office supplies and \$6,000 is requested for administrative travel. A sum of \$6,000 for printing of general brochures, pamphlets and guides for the Gallery will be required as well.

Automation (\$35,000) - In FY 1986, a sum of \$35,000 is requested for the purchase of office automation equipment that will include five personal computer terminals and peripheral equipment to meet most of the immediate needs of the Sackler Gallery when the new building is occupied initially. This sum, together with the \$35,000 appropriated for Sackler Gallery automation in FY 1985, and \$15,000 reprogrammed from the Freer base, will allow the Center for Asian Art in FY 1986 to replace equipment leased in FY 1985 with purchased automation equipment. Automation equipment will be located in the Office of the Director, the library, the editorial office, the Technical Laboratory and various staff office areas. In addition to standard word processing capability, the equipment will provide access to data on the collection of the Center for Asian Art as well as traveling exhibition shows at the Sackler Gallery. Additional functions will reflect the specialization and interests of the various departments, e.g., budgetary functions for administration and scientific analytical functions for the Technical Laboratory. The equipment is expected to provide the capability for better collection management control, better data accessibility for students and other researchers, and more efficient production of manuscripts and exhibition labels, catalogues and related educational materials.

The Office of Information Resource Management is making a determination of the specific equipment to be used at each location. In future years, these funds will support necessary equipment purchases, specialized software, maintenance contracts and programming costs for the system.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided from allotments and are used to defray the costs of special events associated with the opening of new exhibits and to cover the travel costs of members who attend the Center's Visiting Committee meetings. These funds also support the position of coordinator for special programs in the Center.

Restricted Funds - The major portion of the nonappropriated Trust funds used by the Center stems from the Charles Lang Freer bequest and is restricted by the conditions that are stipulated in that document. The funds are used to help finance expenditures of the Freer's professional curatorial staff, administrative staff, acquisitions for the collection and library, the maintenance of the Freer's courtyard and the operation of the Freer museum shop (estimated expenditures of \$1,449,000 in FY 1985 and \$1,522,000 in FY 1986). A grant from the American Telephone and Telegraph Company of \$120,000 was received to support the exhibition and catalogue on the works of James McNeill Whistler. Additional support has been received from the Clark Endowment for the purchase of Japanese art and from the Harold Stern Endowment to support scholarly research (estimated expenditures of \$27,000 in FY 1985 and \$30,000 in FY 1986).

ARCHIVES OF AMERICAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS										
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS		
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount		
FY 1984 Actual	16	693	-	1	-	-	-	16	928	-	-
FY 1985 Base	16	747	-	6	-	-	-	16	1,369	-	-
FY 1986 Estimate	16	819	-	6	-	-	-	19	1,318	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	16	0	16
11 Personnel Compensation.....	593	12	605
12 Personnel Benefits.....	72	2	74
21 Travel.....	21	-	21
23 Rent, Communications & Utilities....	14	6	20
24 Printing & Reproduction.....	22	-	22
25 Other Services.....	17	18	35
26 Supplies & Materials.....	2	-	2
31 Equipment.....	6	34	40
Total	<u>747</u>	<u>72</u>	<u>819</u>

Analysis of Increase

Necessary Pay.....	14
Inflation.....	3
Restoration of FY 1985 2% Reduction....	15
Program Funds.....	40

ABSTRACT - The Archives of American Art is a national research bureau of the Smithsonian Institution with a network of offices across the country. It is the Nation's largest repository of documentary and source materials relating to the history of the visual arts in the United States. Its collections contain more than eight million documents, 400,000 photographs, 75,000 works on paper and some 3,000 tape recorded oral history interviews. The original material in these collections is housed in Washington, D.C. Through a series of regional centers the Archives reaches out to the Nation with microfilm copies of the collections which are readily available to students and scholars; the collections on film also circulate worldwide through interlibrary loan. Regional Centers are located in Boston, New York, Washington, D.C., Detroit, San Francisco, and Los Angeles; temporary offices for special collecting projects are in Houston, Santa Fe, Philadelphia and Seattle. For FY 1986, an increase of \$40,000 is requested for

automation hardware and software for its four regional centers. Necessary pay of \$14,000 is required for existing staff and an amount of \$3,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$15,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - As a national organization devoted to the study of art and cultural history in America, the Archives' primary mission is to provide the fundamental documentation for research and publication on the visual arts in America. The Archives collects basic manuscript materials, photographs, drawings and prints that pertain to research; makes its documentary resources known across the country; and provides easy access to its resources in the form of microfilm. Through the continuing accumulation of letters, diaries, sketchbooks, business papers, photographs, oral history interviews, and other forms of primary records, the Archives offers the raw material for scholarly analysis and interpretation of the arts in America. Its holdings provide primary information on the lives of the artists, art galleries, museums, and the historical events of American art.

Founded in 1954 as a private institution in Detroit, the Archives became a bureau of the Smithsonian in 1970 following a resolution by the Board of Regents and the drawing up of an agreement between the Archives' Board of Trustees and the Institution. The national Board of Trustees provides advice and assistance to the Board of Regents and the Secretary on all matters relating to the Archives. Since the purpose of the Archives is to stimulate research, its constituency is made up chiefly of art historians, museum curators and graduate students. The Archives' resources make possible numerous books, articles, dissertations, graduate papers and exhibition catalogues.

Research - For a Smithsonian research bureau, one measurement of success is the degree to which its collections are used. During FY 1984, 3,300 research visits were made to all offices, a 10 percent increase over 1983, and 1,900 rolls of microfilm were lent to researchers through libraries in the United States and abroad, a 36 percent increase over the prior year. Earlier research conducted at the Archives came to fruition this year in the form of several dozen books, exhibition catalogues and films. In addition to its catalogue, inventories, and other finding aids, detailed accounts of recent acquisitions are published in the quarterly Archives of American Art Journal and reports are given regularly to an expanding national network of advisory committees representing the scholarly community.

Future plans for the Archives include: the compilation of a finding aid to documents of the Federal Art Project to commemorate the Project's 50th anniversary in the summer of 1985; the first publication in a series of sources and documents in the history of art in America (in FY 1986); an expansion of the Journal to include additional documents from the collection; and a finding aid to the photographic collection.

Development of Collections - Collections of papers received in the past year cover one and one-half centuries of American art. They include the records of William Edward West, an early 19th-century portrait painter; substantial microfilmed groups of papers of Thomas Cole and Winslow Homer; important series of letters from Mark Tobey and Adolf Dehn; and a large quantity of the correspondence, diaries, photographs, and manuscript writings of the Philadelphia artist Violet Oakley. The Edward Corbett papers have useful letters from Ad Reinhardt and Clyfford Still, and those of the caricaturist Al Hirshfeld contain fan mail from notable theater and literary figures. Negotiations conducted over several years with the Jackson Pollock estate came to a successful conclusion in 1984 with the acquisition of his records. For the Archives, perhaps the most gratifying accession was the voluminous files of its founder, the eminent art historian Edgar P. Richardson.

The Oral History Program continued two major projects and completed a third. Begun as a project in FY 1981, further reminiscences of the artist Mark Rothko (one of the most important and influential artists since World War II) were obtained from close friends and associates. A combination of oral and video interviews with selected artists in five cities, begun in 1983, will use as subjects this year Frank Stella, Tom Wesselman and Sam Gilliam. The two-year Pacific Northwest oral history project concluded in 1984 with the completion of 30 taped interviews on the art of that region. The Archives conducted 64 oral history and audio-visual interviews in FY 1984, compared with 59 in FY 1983, in its continuing effort to document contemporary artists, craftsmen, dealers, critics and art historians.

Preliminary surveys of institutional holdings of art records in Philadelphia, Rhode Island, and New York libraries, historical societies, and museums in those areas are now under way, while a similar project in Santa Fe and in Taos, New Mexico, is being conducted by the Archives' Texas center in Houston. In a significant new development for collecting in the Southwest and Southern California regions, the Archives opened a Los Angeles area office in 1984. Housed at the Huntington Library and funded entirely by local contributions, it will serve as an additional base for acquisitions and research on the West Coast.

In the current year, cooperative programs of collecting are being arranged with other archival and scholarly institutions, and an index of papers not in the Archives is being established. It is expected that by FY 1986 a significant data base of existing collections will be established, which will allow for both study and exhibition. The Archives also expects that the large collections of papers from institutions such as the American Federation of Arts, the American Academy in Rome and the papers of the Carnegie International Exhibitions will be catalogued and ready for use. A large project to film the collection of papers of J.A.M. Whistler will be completed this year.

Exhibitions - The Archives makes available selections from its holdings to museums for exhibition purposes. The successful large scale exhibition of David Smith papers at the Hirshhorn Museum and the San Antonio Museum of Art last year was followed by an exhibit on Gertrude Vanderbilt Whitney at the National Portrait Gallery. The Whitney Museum of American Art borrowed from the Archives substantial groups of letters, photographs, and sketchbooks for three exhibitions: works by Reginald Marsh, the architect Raymond Hood, and for the recreation of the influential Forum Show of 1916. Similar material supplemented an exhibition of the early 20th-century realist group "The Eight" at the Hirshhorn Museum and the Terra Museum of American Art in Evanston, Illinois. Documents from the papers of the American symbolist painter Claude Buck accompanied an exhibition of his work in San Francisco, and the Harry Gottlieb papers supplied useful items to Rutgers University.

Under consideration for FY 1985 is an exhibition of photographs of artists' studios with a publication drawn from supporting manuscript material, and in FY 1986 an exhibition of drawings, manuscripts and photographs concerning the early history of the American Academy in Rome.

Public Education - The Archives' educational activities include symposia, staff lectures, art tours and publication of the Archives of American Art Journal. In FY 1985, the Archives will cosponsor a symposium in Los Angeles and San Francisco called "Los Angeles in the 1940s." The symposium will address such topics as how the city's culture and environment influenced musicians, painters, sculptors and other artists, and what these artists contributed during this decade. Lectures, films, panel discussions, and musical presentations will be presented in cooperation with a non-profit humanities group. Still in the planning stages, is a series of symposia and meetings on public art in the United States, to be cosponsored with the Center for American Culture Studies of Columbia University.



As a new educational project, the Archives began development of a film on its activities. This endeavor will enable the Archives to reach a vast national audience through television and other means of distribution.

Conservation and Care of Collections - A significant accomplishment in 1984, was the final elimination of some 7,755 nitrate negatives from the photograph collections. Some were copied onto safety film while others were either put in cold storage or destroyed. Moreover, a survey and analysis of the condition of photographs, especially those of esthetic or historic value, has begun with expert assistance from the National Portrait Gallery.

During FY 1985 and FY 1986, the Archives will give increased attention to the management and care of collections. Deteriorating microfilm gradually will be replaced. The Archives also will continue its inventory program to reconcile the physical collection to the accession records, and will initiate indexing and cataloguing related to the automated collections management system implemented in FY 1984 and FY 1985. A further description of the Archives' inventory plans is included in the Collections Management/Inventory Program section of this budget request.

#### EXPLANATION OF PROGRAM INCREASE:

Automation (\$40,000) - In FY 1986, an increase of \$40,000 in base funding is requested to purchase four personal computers and peripheral equipment (\$20,000) and for maintenance, supplies, Smithsonian mainframe user fees, and telecommunications charges (\$20,000).

Until FY 1984, the Archives of American Art conducted nearly all of its operations manually. Given the complexity of the operations, the size of the collections, the multiple sources and different types of funding, the geographical dispersion of the regional centers, and the limited staff support at every level from collecting to collections management to administration, it is essential that the Archives become fully automated. Automation will allow the Archives to gain critical physical control necessary to maintain its collection of eight million documents, an active membership program, and multiple office systems. The Archives has no base allotment for development of automation systems and purchases to date have been piecemeal from internally reprogrammed monies.

In FY 1984, with the assistance of the Smithsonian's Office of Information Resource Management (OIRM), the Archives acquired four terminals and two printers, which were dedicated solely to the Smithsonian Institution Bibliographic Information System, for its Washington office for the central processing of all collection items. By the summer of 1985, with OIRM's assistance, five additional bibliographic system workstations will be provided in the regional centers. These terminals will allow the Archives to provide users with easier and fuller access to the collections, as well as develop more helpful guides to the collections through expanded cataloguing, references, and subject headings.

Because these terminals are dedicated solely to the bibliographic system, the Archives purchased four additional computer stations and several software packages in FY 1984 to automate the non-bibliographic functions of the Washington, D.C. and New York offices. As the administrative centers of the Archives, these two offices will develop the specialized programs to be used by the other regional centers. Meanwhile, automation of the cataloguing process, using the bibliographic system, is proceeding.

For FY 1986, the Archives is requesting a sum of \$40,000 to allow it to complete the initial phase of building its basic, national office automation network with the purchase of automation hardware and software for the remaining four regional centers. Of the

requested amount, \$20,000 is needed to purchase four computer systems for the non-bibliographic functions of the regional centers in San Francisco, Los Angeles, New York, and Boston. The remaining \$20,000 will be used for telecommunications (\$6,000), central computer services (\$9,000) and maintenance contracts (\$5,000). It is anticipated that the full \$40,000 will be necessary in future years to meet the rising cost of telecommunications, maintenance fees, and periodic equipment replacement.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided to defray costs associated with special events and to supplement the travel expenses incurred by the Archives' Board of Trustees.

Restricted Funds - These are generated through fund-raising activities, the solicitation of gifts, as well as foundation and corporate grants, and a membership program. A substantial portion of this income is used to support the Archives' general operating expenses, including 16 full-time employees, its Oral History Program, and the entire publications program.

Foundation and corporate grants have provided the principal sources of support for special projects. The Luce Foundation and Lehman Foundation are supporting collection projects in Philadelphia, Rhode Island and New York (estimated expenditures of \$112,000 in FY 1985 and \$50,000 in FY 1986). Development of a film on the Archives' activities to reach a vastly increased audience, through television and other means of distribution, has been started through a grant from the Robert Wood Johnson Charitable Trust (estimated expenditures of \$70,000 in FY 1985 and \$98,000 in FY 1986). In FY 1984, the Archives opened its Los Angeles area office, extending service to southern California, housed at the Huntington Library and funded entirely by local contributions (estimated expenditures of \$104,000 in FY 1985 and \$113,000 in FY 1986). Support in FY 1986 and FY 1987 will be sought to publish a series on the history of art in America and for a publication of selected prints in the Archives' collection of photographs.

COOPER-HEWITT MUSEUM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
FY 1984 Actual	25	843	18	739	5	1,022	1	195	-	99
FY 1985 Base	25	890	18	717	5	1,023	1	732	-	50
FY 1986 Estimate	26	995	18	747	5	1,100	1	812	-	50

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	25	1	26
11 Personnel Compensation.....	681	54	735
12 Personnel Benefits.....	72	7	79
21 Travel.....	5	-	5
23 Rent, Communications & Utilities....	15	5	20
25 Other Services.....	54	10	64
26 Supplies & Materials.....	61	12	73
31 Equipment.....	2	17	19
Total	890	105	995

Analysis of Increase

Necessary Pay.....	32
Inflation.....	5
Restoration of FY 1985 2% Reduction....	18
Program Funds.....	50

ABSTRACT - The Cooper-Hewitt Museum opened its doors to the public in October 1976 as the Smithsonian Institution's museum of design. Housed in New York City's national landmark Andrew Carnegie Mansion, and in the adjacent Miller House, the Cooper-Hewitt holds world-renowned collections that include drawings, prints, textiles, wallcoverings, furniture, jewelry, glass, ceramics, metalwork and other examples of decorative and applied arts representing three millenia and dozens of cultures. The Museum is a leading international center for the study and interpretive display of the arts of design. For FY 1986, an increase of 1 workyear and \$50,000 is requested to launch a program of coordinated automated information systems. Necessary pay of \$32,000 is required for existing staff and an amount of \$5,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$18,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Cooper-Hewitt Museum is a center for collections, exhibitions and educational activities which explore the processes and products of historical and contemporary design. The Museum was established as the Cooper Union Museum for the Arts of Decoration in 1897, providing a hands-on working laboratory for the benefit of designers, irrespective of whether they were practitioners or students. Through the generosity of several benefactors, extraordinary resources were assembled and made available for study. These resources have since been described as some of the most distinguished "working" collections of the applied arts in the world.

The Museum's collection of drawings is the largest of any museum in this country, and its prints, textiles, and wallpaper holdings are of international importance. The Dreyfuss Study Center, with a library of 35,000 volumes and a massive archive of related materials, is recognized as being among the most important of its kind in the world. An important contribution to the world of decorative arts is made by the collections of the Cooper-Hewitt which are composed of groups of jewelry, silver, porcelains and other ceramics, glass and furniture.

In 1967, the Museum and library were transferred by the Cooper Union to the Smithsonian Institution and renamed the Cooper-Hewitt Museum, the Smithsonian Institution's national museum of design. Today, the Museum is housed in a national and city landmark, a 1902 mansion built as the residence of philanthropist Andrew Carnegie, and in an adjacent townhouse. These properties were given to the Institution in 1972 by the Carnegie Corporation as a permanent home for the Museum. The Cooper-Hewitt is one of the principal attractions of New York City's famous "Museum Mile" on Fifth Avenue.

Through an active exhibitions program (12 to 16 projects per year), related publications and innovative educational programming, the Museum serves a widening and increasingly enthusiastic public. A membership program serves 5,500 individual and family membership holders annually, and provides the opportunity for interested, appreciative persons to offer the Museum a measure of tangible support. In FY 1984, the Cooper-Hewitt welcomed over 129,000 visitors. A pattern of service to a growing, loyal public has been established, despite the Museum's youth.

In FY 1984, Cooper-Hewitt exhibitions and publications presented subjects as diverse and as innovative as contemporary uses of continuous pattern in textile design, the artistry of Renaissance silversmiths, traditional arts of the American Plains Indians, design traditions of tea, and Dutch Expressionist architecture. Dutch Expressionist architecture was treated in great depth in "The Amsterdam School: Dutch Expressionist Architecture 1915-1930," which was the first analysis of this important topic prepared for English-speaking audiences. A book of the same title is now being distributed for the Museum by M.I.T. Press. Architecture was also the focus of another major FY 1984 exhibition and publication, "Manhattan Skyline: Between the Wars," which was organized by the Museum with partial support from the New York State Council on the Arts (NYSCA).

In a very different vein, and again with assistance from the NYSCA, the Museum's Textiles Department in FY 1984 organized a first showing of the finest embroidered examples from the large collection of samplers. A stitch guide and collection handbook, illustrating samplers from various European, American, and other cultures, accompanied the exhibition. Tea was the theme of another major exhibition which surveyed the variety of design considerations and traditions that have been generated by that ubiquitous beverage. This exhibition included teapots and utensils used in the service of tea.

Numerous smaller exhibitions in FY 1984 included: a study of the highly individual esthetic theory evolved by the architectural sculptor John De Cesare which related musical and visual forms; selections from the Museum's extensive holdings of prints by the Tiepolo family; and a recently acquired collection of antique European damask textiles.

Others were devoted to intricately carved and finished netsuke figures from Japan; the world-famed Schroder Collection of important Renaissance silver objects; and the Minneapolis Institute of Fine Arts' impressive Doneghy Collection of southwest American Indian silver.

Three other large exhibitions mounted in FY 1984 reinforced the diversity of the Museum's interests. "American Enterprise: Nineteenth Century Patent Models" was a popular panoply of colorful and amazing relics of the history of American patent law and Yankee ingenuity (together with a book of the same title); and "Circles of the World: Traditional Art of the Plains Indians," gave visitors to the Cooper-Hewitt the opportunity to enjoy and study the sumptuous Native American design achievements which are found among the superb holdings of the Denver Art Museum.

In FY 1985, the Museum has portrayed, thus far, "Embellished Calendars" and "New Vistas: American Art Pottery from the Goodman Collection." During the remainder of FY 1985, the Museum plans to feature "Fabled Cloth: Batik from Java's North Coast," "Chicago Furniture," "Chinese Gold and Silver from the Tang Dynasty (AD 618-907) from American Collections," "Paestum and the Doric Revival," "Wine," "Rare Books from the Cooper-Hewitt Collection," and the art of contemporary European illustrators. Among the many specialized subjects and larger thematic areas being developed for exhibitions and publications in FY 1986 and beyond are: Berlin in the 1920s, the influence of Asian Indian culture on design, printed fabrics, ribandry, railroads, underwater life, color and light, and death.

Among the most important recent changes at the Cooper-Hewitt has been the successful launching of an accredited, two-year masters degree program in the decorative arts which is administered jointly by the Museum and the Parsons School of Design. FY 1984 saw the graduation of the first class admitted to the program and the admission of the third. The Museum continued, simultaneously, to offer courses in the history of art and design for undergraduate degree credits, which was also in coordination with Parsons. Hundreds of individuals who register for courses at the Museum each academic quarter are drawn by lecturers dealing with subjects related to current temporary exhibitions; the history of landscape; industrial or interior design; architectural criticism and history; craft demonstrations; and tours. Special programming is developed continually for children and special audiences who cannot visit the Museum.

In the fundamental area of collections management, the Cooper-Hewitt continues to refine inventory records, reconcile discrepancies between pre-existing records and the automated listings created for the recent comprehensive collections inventory project, develop more complete location guides, and add records for new acquisitions. A further description of the Museum's inventory efforts is included in the Collections Management/Inventory Program section of this budget. Also in FY 1984, the Museum obtained a grant from the New York State Council on the Arts to permit the appointment of a staff photographer. A basic photography studio was established during the grant period and intensive efforts were directed toward the goal of documenting important segments of the decorative arts collection which had not been previously photographed. The Museum will initiate an effort to organize and care for its extensive archival holdings during FY 1985 and FY 1986. While not formally part of the permanent collections, these materials (estimated to contain several hundred thousand images and items) are invaluable documents which closely complement both the Museum's collections of objects and its celebrated library resources. Although not dealt with during the permanent collections inventory process, these rich holdings are a very high priority for continuing collections management energies.

In FY 1984, with additional grants from the New York State Council on the Arts, the Museum continued to serve as a conservation advisory center for smaller institutions throughout the State and was able to offer a paid internship in textiles conservation to a young professional.

In connection with its long-sought Capital Campaign, the Museum consulted throughout FY 1984 with a professional fund-raising firm. An architectural firm refined conceptual plans for major expansion and renovation of the Museum's town house structure. Preliminary legal and construction management studies and related discussions with local authorities and prospective donors have produced positive results, and in January 1984, the Board of Regents officially authorized the initiation of a major fund-raising effort.

#### EXPLANATION OF PROGRAM INCREASE:

Automation (1 workyear and \$50,000) - The Cooper-Hewitt's need for carefully automated information systems is evident both to the Museum and to the Smithsonian's Office of Information Resource Management. The Museum's diverse financial activities, which are managed onsite by the Museum, but which require frequent exchange of information with central accounting and other offices in Washington, D. C., can be managed more efficiently and effectively with the use of labor-saving automated systems. Moreover, with permanent collections numbering over 167,000 items, the Museum can improve public access to collection information with automation capabilities.

However, the Museum presently does not have any permanent professional staff with expertise in automation planning. Therefore, an increase of 1 workyear and \$29,000 is requested to hire a management analyst to assure the most effective possible uses of the museum's present automation equipment; to develop technologies in those departments and programs where such capabilities will generate the greatest cost savings; and increase efficiency in all areas of the Museum's activities.

Moreover, the Museum's micro-computer (acquired by donation) requires extensive upgrading to improve its cost effectiveness and performance. An increase of \$16,000 is sought to purchase supplementary equipment, software and related supplies; and \$5,000 is requested for increased communication costs, resulting from expanded use of the computer to transmit information and data to other Smithsonian offices in Washington, D.C. Base resources of approximately \$6,000 (Federal and Trust funds) per year currently go toward communication costs for a terminal that provides linkage between the Museum and Washington, D.C., for processing payroll, accounting and collection inventory data, and for annual service costs for the Museum's micro-computer. In FY 1987 and following years, the expanded automation base will be used to expand the system throughout the Museum, based on the planning provided by the management analyst.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from a variety of sources including museum shop sales, product development, membership and admission fees, donations, fund-raising events, and allotments. The allotments support salaries of the director, administrative officer and various other staff members and help defray expenses associated with special events such as exhibition openings. Specific funds are used to support various educational programs, museum shop expenses, exhibitions and publications for the Museum.

Restricted Funds - These funds are provided from grants, bequests, and other donations from individuals, foundations, organizations, or corporations for specific purposes. In FY 1985 and FY 1986, these funds will support: "Wine" (estimated expenditures of \$180,000 in FY 1985); "Fabled Cloth: Batiks from Java's North Coast" (estimated expenditures of \$25,000 in FY 1985); "Death" (estimated expenditures of \$200,000 in FY 1986); "Berlin in the 1920s" (estimated expenditures of \$50,000 in FY 1985 and \$200,000 in FY 1986); and "ManTRANSforms II" (estimated expenditures of \$50,000 in FY 1985 and \$250,000 in FY 1986).

Federal Grants and Contracts - These funds are provided by various government agencies and departments for specific program support. The Museum annually seeks funding in varying amounts from the New York State Council on the Arts for exhibition support and other programs as well. Requests for eight separate projects were submitted for possible funding in FY 1985 (estimated expenditures of \$50,000 in FY 1985 and in FY 1986).

NATIONAL MUSEUM OF AFRICAN ART

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS										
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS		
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount	
			Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1984 Actual	27	1,043	-	73	-	104	-	33	-	-	-
FY 1985 Base	32	1,248	3	88	-	16	-	65	-	-	-
FY 1986 Estimate	40	2,945	1	39	-	14	-	52	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	32	8	40
11 Personnel Compensation.....	815	213	1,028
12 Personnel Benefits.....	102	23	125
21 Travel.....	21	25	46
22 Transportation of Things.....	21	152	173
23 Rent, Communications & Utilities....	3	-	3
24 Printing & Reproduction.....	55	225	280
25 Other Services.....	93	374	467
26 Supplies & Materials.....	111	500	611
31 Equipment.....	11	85	96
Collections Acquisition.....	16	100	116
Total	<u>1,248</u>	<u>1,697</u>	<u>2,945</u>

Analysis of Increase

Necessary Pay.....	35
Inflation.....	13
Restoration of FY 1985 2% Reduction....	25
Program Funds.....	1,624

ABSTRACT - The National Museum of African Art is the only museum in the United States devoted solely to the collection and preservation, exhibition and related educational programs, research and documentation of the visual arts of Africa. Founded in 1964 as a private institution, the Museum became a bureau of the Smithsonian Institution in August 1979 following the enactment of Public Law 95-414. In 1986, the Museum will move from its Capitol Hill properties to The Mall as a part of the Smithsonian's Center for African, Near Eastern, and Asian Cultures. For FY 1986, an increase of 8 workyears and \$1,624,000 is requested for the expanded activities including the preparation for three important inaugural exhibitions that will be presented in the Quadrangle, scheduled



to open in 1987. Necessary Pay of \$35,000 is required for existing staff and an amount of \$13,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$25,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The National Museum of African Art (NMAfA) endeavors to promote through the visual arts an interest in and an understanding of the diverse cultures of Africa south of the Sahara. Although the Museum's primary emphasis is on the traditional cultures of the sub-Saharan region, it also studies, accepts into its collections and occasionally exhibits the arts of North Africa as well as the ancient and contemporary arts of the entire continent. The Museum develops and implements a variety of interpretive programs: exhibitions, lectures, tours, classes, workshops, audio-visual presentations, and publications. Each program endeavor is motivated by the esthetics of traditional African art, and the Museum actively cooperates and coordinates its activities with those organizations and institutions whose purposes are complementary.

During FY 1985 and FY 1986, the Museum's plans and efforts will be directed intensively toward its move to the Center for African, Near Eastern, and Asian Cultures in the Quadrangle. This is a sizable physical undertaking because shortly after the relocation, all programs of the Museum, including research, exhibitions, collections, public education and orientation, must be operative in time for the scheduled 1987 opening.

Research - The Eliot Elisofon Photographic Archive is one of the Museum's strongest research components. It is one of the largest archives in existence on African art, culture and environment. Its holdings now consist of about 33,000 color slides, 35,000 black and white photographs, 75,000 feet of unedited film footage and 50 feature films. In FY 1984, the Archive provided more than 1,500 slides or photographs for personal, academic and publication purposes. In addition, more than 1,000 telephone and 250 written responses for visual information were serviced. Within the Museum, the curatorial and education staffs depend upon the Archive for research, exhibition and teaching purposes. In FY 1984, the Archive was able to acquire a series of five documentary films produced in 1982 by the National Ministry of Information of the Ivory Coast in consultation with African and Western anthropologists.

During World War II, well over 1,000 negatives of an extensive photo archive of African people, villages, and artisans, compiled by Eva Meyerowitz in the 1930s, was destroyed. Only one set of contact prints, owned by Professor Meyerowitz, survives. She has generously permitted the National Museum of African Art to copy a portion of the set (approximately 200-300 photos) in FY 1985 for its archives. This is an extremely valuable and irreplaceable resource of African imagery for a period when relatively few photographs exist.

In FY 1984, the National Museum of African Art began with appropriated funds, a Union Catalogue Project of its African art objects. This project is coordinated for the entire Institution by the National Museum of Natural History/Museum of Man. The collection documentation is an invaluable resource for research work. It enables the Museum to compile and present collection information in a systematic format. The absence of a standard specialized terminology in African Art studies has been one of the most difficult aspects of research. The Union Catalogue addresses this need for standardization by utilizing terminology that is suited uniquely to the special requirements of African art research. In addition, all automated entries reflect the most current field data and reference literature, thereby assuring accurate attribution, regional and ethnic styles, and when possible, chronological classifications. Also, photographs now exist for most of the primary holdings in the collection. This project may become a model for other museums for cataloguing African art collections as well as facilitate access to objects for research purposes. During FY 1986, the Museum plans to concentrate more intensively on research opportunities for its curatorial staff, as well as visiting research

scholars who will be offered a unique research opportunity for post-doctoral fellowships in residence at the National Museum of African Art.

Exhibitions - A systematic exhibition program is viewed as one of the most effective methods the Museum has to assure public understanding of African art and culture and to develop new research. Each exhibition contains objects which are considered to be the finest of their type esthetically. In FY 1983, the Museum established its first exhibition schedule covering a four-year period. In FY 1984, the Museum organized, "African Mankala," an examination of a type of African gameboard, from historical and cultural perspectives and as an esthetic form. Loans for this exhibition came from United States public and private collections, as well as from museums in Antwerp, Brussels, Hamburg, Stuttgart and Paris. It was the first time NMAFA had successfully cooperated with major lending institutions in Europe. In FY 1985, three major traveling exhibitions have been scheduled: (1) "Praise Poems: The Katherine White Collection," one of the foremost American private collections now a part of the Seattle Art Museum that organized the tour; (2) "African Masterpieces from the Musee de l'Homme," an exhibition organized by The Center for African Art, New York, consisting of 100 celebrated works collected by early French explorers, during French scientific expeditions, or acquired as gifts, all now a part of the Musee de l'Homme collection; and (3) "Igbo Arts: Community and Cosmos," organized by the UCLA Museum of Cultural History, the first comprehensive examination in the United States of the art of the Igbo people of Nigeria. Other noteworthy exhibitions in FY 1984 were "Ethiopia: The Christian Art of an African Nation," circulated by the Smithsonian Institution Traveling Exhibition Service, and an exhibition of selections from NMAFA permanent collection, titled "Pattern and Form in African Art." As in FY 1984, and continuing through FY 1985, a series of small, rotating exhibitions focusing on individual objects in the Museum's collection will be organized.

During the first part of FY 1986, the Museum will be operating at its location on Capitol Hill. Exhibitions already planned for that site include: "Bamana Masks and Figure Sculpture from the Western Region of the Sudan" to be organized by the Museum, and an exhibition of "Tabwa Art" organized by the University of Michigan Museum of Art, Ann Arbor.

Development of Collections - The Museum's permanent collection of 6,100 objects represents hundreds of ethnic styles. During FY 1984 and FY 1985, collection development has led and will continue to lead the list of priorities on the Museum's agenda. The art object is as fundamental to the work of an art historian as the scientific specimen is to the work of a scientist. Research, exhibitions, education and outreach programs and publications flourish when a collections development program is vital and thriving. Many of the cultures of Africa south of the Sahara present unique opportunities for investigation and for understanding the meaning and cultural context of a variety of objects and artistic traditions. To accomplish this, an active acquisition program is essential since cultural changes are taking place quickly throughout Africa.

In FY 1984, the Museum acquired 154 works of art that included a donated private collection of 62 examples of N'Debele beadwork from Southern Africa, and a donated private collection of 26 metal objects from the western region of the Sudan. In addition, private donated funds were used for the acquisition program. Of the total 154 acquisitions, 14 were purchased with appropriated funds. Important purchases from appropriated funds included: a Nigeria, Yoruba figurative cult staff; a Nigeria, Yoruba divination board; a Guinea-Bissau figurative staff finial; a Republic of the Sudan, Topossa pendant; a Zaire Kuba, applique textile; a Zaire bride price in the form of an exaggerated blade; and a Zaire, Yombe hat. In FY 1985, significant purchases included: an Akan fired clay head and an Ibibio funerary shrine cloth. Important gifts included a Nigeria, Yoruba herbalist staff; a rare Zaire, Tetela mask acquired through a James Smithson Society grant. Two unusually fine beaded Sudan, Topossa hats were acquired with funds donated by the Friends of the National Museum of African Art. In FY 1985, a Congressional increase

enabled the Museum to hire an assistant registrar and a clerk typist to strengthen the Museum's registrarial function, and a chief conservator to establish the first comprehensive program designed to protect and preserve the Museum's collections. These new staff are presently at work on the opening of the three inaugural exhibitions for 1987.

Public Education and Orientation - The Museum's public education and orientation program services a broad spectrum of the American public. Program content is developed entirely from the Museum's collections, research efforts, and exhibition schedule. During FY 1984 more than 300 scheduled tours for elementary and secondary school groups, as well as for adults were arranged by a teaching/training staff of four with docent assistance. Approximately 500 additional requests could not be accommodated because of space limitations on Capitol Hill and the size of the Museum teaching staff. In addition to scheduled tours, the Museum presented more than 50 art workshops in FY 1984, and completed a four month pilot program with a District of Columbia elementary school.

The Museum extends its educational activities through outreach programs. One program on African textiles, developed for senior citizens, began in FY 1984. It has serviced about 600 residents in 27 facilities in the metropolitan area and will operate again in FY 1985. In addition to these programs the Museum has scheduled throughout FY 1984 and FY 1985 special lectures and films to increase visitor understanding of specific exhibitions, and has developed special written materials, also exhibition related, for use by teachers.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, an increase of 8 workyears (for 14 positions, two of which are temporary, to be phased in during the year) and \$1,624,000 is requested to prepare for the expanded activities that will be presented in the Quadrangle, scheduled to open in 1987. This increase is detailed below.

Exhibitions (2.25 workyears and \$1,211,000) - For FY 1986, an increase of 2.25 workyears and \$1,211,000 is requested to design and install the inaugural exhibitions in the Museum of African Art's portion of the Quadrangle. Present base resources of \$284,000 provide three modest exhibitions a year in approximately 4,000 square feet and fund an exhibition support staff of five, including the addition of an exhibits designer and \$50,000 for nonsalary exhibits expenses appropriated in FY 1985.

For public opening in 1987, three major opening exhibitions will be installed: "African Art and the Cycle of Life" (working title), "African Textiles," and "African Art from the Permanent Collection." There also will be smaller displays in the Orientation Gallery and Focus Gallery. These exhibitions will occupy space that is approximately four times larger than the Museum's present facility on Capitol Hill.

An increase of \$1,160,000 is sought for the inaugural exhibitions including costs associated with borrowing objects of the highest esthetic quality from European, American and African collections, the majority of which have never been seen in the United States, for the exhibition "African Art and the Cycle of Life." The proposed monies will ensure that this exhibition and the "African Textiles" and "African Art from the Permanent Collections" exhibitions are designed handsomely, installed properly, secured and lighted. Photographic panels illustrating aspects of African Art, culture and environment will be displayed in the Orientation Gallery as well as throughout all public areas of the Museum. An exhibition catalogue will accompany the "African Textiles" exhibition and audio-visual programs will be produced and installed for "African Art and the Cycle of Life" and "African Textiles" to further enhance the viewer's perception of the art in its cultural context. In addition, informational brochures, gallery guides and text panels will be produced for all exhibitions. The proposed increase is required as follows: packing and shipping (\$150,000); contractual services and insurance (\$370,000); supplies and materials for fabrication and installation (\$460,000); printing (\$145,000); equipment (\$10,000); and travel (\$25,000). Such sums would also represent a

working base of financial resources to assure an orderly program of changing exhibitions in future years. To supplement the Federal request for the inaugural opening, a grant has been received which includes funding for a definitive catalogue for the "African Art and the Cycle of Life" exhibition.

Since the Museum has never had comparable exhibition space, it does not have the full complement of staff needed for the opening and subsequent exhibition installation. Therefore, a further increase of 2.25 workyears and \$51,000 is requested to hire five new positions. These consist of a writer/editor, with a familiarity with specialized terminology associated with non-Western visual and cultural traditions, to assist in the preparation of text panels, caption labels, catalogues and informational brochures that accompany exhibitions; a graphic designer to ensure that materials of this kind are attractively designed and communicate the substance of each exhibition; and an exhibit production assistant, a carpenter and a shop foreman to become part of the permanent staff to assist in exhibition construction and installation. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.)

Collections Management (1.75 workyears and \$31,000) - An increase of .75 workyear and \$21,000 is requested to hire a staff photographer during FY 1986 to provide an ongoing visual record of collection material, a record essential to collections management, and to produce photographs for catalogues, brochures, exhibitions, guides, press kits and other printed material. The Museum presently has no staff photographer and has had to rely on outside contracts for its photographic services. The services of a staff photographer will become even more necessary as the Museum's collections and programs expand once it moves to new quarters on The Mall. (Funding for the full-year costs of this position is anticipated in the FY 1987 budget request.) In addition, an increase of 1 workyear and \$10,000 is sought in FY 1986 to hire two temporary museum technicians to assist in the inventorying, packing and crating of 6,000 items in the permanent collection that will precede and follow the move of the collection to the new facility.

Education and Public Orientation (1.25 workyears and \$133,000) - The Museum of African Art plans an expanded education program to accommodate the increase in visitation that is projected for the Quadrangle. Present base resources of \$160,000 and five staff members now permit the Museum to handle approximately 300 organized visitor groups per year and publish a maximum of two teaching/program guides per year. By contrast, over 1,000 such tours are anticipated in the Museum's new home on The Mall.

To prepare for this expansion, an increase of 1.25 workyears and \$33,000 is requested to hire an education specialist and a docent coordinator during FY 1986. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) A further \$38,000 is requested to develop and produce new educational programs for Mall visitors, outreach programs to schools and senior citizen centers, expanded docent training programs, and a lecture and film series. Appropriately printed materials would be produced in connection with these various educational activities.

An increase of \$62,000 also is requested to design a general museum brochure, a calendar of events, information flyers and the necessary production costs of such material. Current stock of printed material is limited and will be obsolete. This proposed increase would provide funds for the production of public service announcements for both radio and television, in cooperation with the Smithsonian Office of Public Affairs.

Research (1.75 workyears and \$51,000) - The increase of 1.75 workyears and \$51,000 is needed to hire a curator of Central African Art and a secretary for the entire curatorial department during FY 1986. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) The present curatorial staff is divided into areas of special expertise according to cultural/regional division. The existing staff

of two full-time curators, and an assistant curator hired with an increase granted by Congress in FY 1985, lacks expertise in Central African art. Two of the inaugural exhibitions will include material from that region of Africa and such curatorial expertise will assure that these exhibitions meet the highest professional standards.

Collections Acquisition (\$100,000) - The Museum has base funding of only \$16,000 for acquisitions. At its present level of funding, the Museum cannot systematically fill gaps within the collection from major esthetic styles throughout Africa. A stronger acquisition program would benefit all areas of the Museum's activity. Research opportunities would expand (the costs of assembling first-rate objects for exhibitions would drop), potential donors of art works would be assured that their pieces were joining a stronger and continually improving collection, and public exposure to the best African art would be greatly enhanced.

There are works of African art that are available and would greatly strengthen the collection, ranging in price from \$16,000 to \$25,000. While these objects would be important additions to the collection, it should be noted that the price of rare pieces of traditional African art now available are in the range of \$100,000 to \$250,000. An increase of \$100,000 will provide the Museum with base funding of \$116,000 for acquisitions.

Automation (\$50,000) - At present, NMAfA has no computer capability. The amount requested for FY 1986 will provide the basic automation equipment needed to permit registrarial and curatorial staff to participate in the Institution's central collection information system; to perform more efficient administrative activities such as budget control, filing, and personnel record keeping; and to write and edit material for exhibition preparation, publication, and educational programming. The proposed increase would allow the purchase of six terminals, four printers, software and required training for staff members. This funding will be used in subsequent years to maintain the hardware and software, and to purchase the balance of the equipment recommended for the Museum's use by the Smithsonian Office of Information Resource Management.

Administration (1 workyear and \$48,000) - Finally, an increase of 1 workyear and \$25,000 is requested for an administrative assistant to help coordinate all of the Museum's new and expanded activities and a clerk-typist to assist with telephone inquiries, the compilation of lists for inaugural activities, and the increased volume of correspondence that will result from the international aspect of the opening exhibitions. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) A final increase of \$23,000 is requested to purchase copying equipment, typewriters and other related office equipment.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from the Museum's share of sales in the museum shop, membership contributions, courses conducted in cooperation with metropolitan area public education institutions, and allotments. They are used to support the cost of certain museum programs, opening of new exhibitions and to defray travel costs associated with meetings of the Museum's Commission. An allotment was provided in FY 1984 and in FY 1985 for the mortgage payments at the present location on Capitol Hill and to support insurance premiums plus the salary and benefit costs of three employees. Funds from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program were used to purchase the Lamb Collection of cloths and objects related weaving and other textile processes from West Africa (purchased jointly with the National Museum of Natural History/Museum of Man).

Restricted Funds - Funds provided here are in the form of grants and gifts from individuals, foundations, organizations or corporations for specific purposes.

Generally, they provide support for a particular project or exhibit. For example, in FY 1984, a grant received from the Women's Committee of the Smithsonian National Associate Program and the Friends of the National Museum of African Art provided support for the purchase of five Ivory Coast documentary films. These films provide a sound contextual basis for understanding the most important Ivory Coast visual traditions. A James Smithson Society grant enabled the Museum to acquire a rare mask from the Tetela people of Zaire. The National Museum of African Art recognized from inception that the FY 1986 request for appropriated funds for its inaugural exhibitions would need to be supplemented with funds from the private sector. In FY 1984, application was made to the Cafritz Foundation and a three-year grant was awarded in FY 1985 toward the planning and presentation expenses of the exhibition "African Art and the Cycle of Life." Funds from various individuals, organizations and corporations provided support for the Education Department which, among its programs, conducts credit courses each semester in cooperation with local universities (estimated expenditures of \$19,000 in FY 1985 and \$22,000 in FY 1986). Gifts and grants also are anticipated to support a special publications program, the first volume of which is titled African Art in American Collections (estimated expenditures of \$46,000 in FY 1985 and \$30,000 in FY 1986). The Museum is actively seeking outside support from various sources to acquire or supplement the acquisition of important major works for the collection as well as to support its education, research and exhibition programs.

ANACOSTIA NEIGHBORHOOD MUSEUM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	18	741	1	32	-	-	-	2	-	-
FY 1985 Base	19	866	1	38	-	-	-	1	-	-
FY 1986 Estimate	19	914	1	39	-	-	-	1	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	19	0	19
11 Personnel Compensation.....	504	17	521
12 Personnel Benefits.....	63	2	65
21 Travel.....	5	-	5
22 Transportation of Things.....	4	-	4
23 Rent, Communications & Utilities....	46	-	46
24 Printing & Reproduction.....	31	6	37
25 Other Services.....	73	19	92
26 Supplies & Materials.....	120	4	124
31 Equipment.....	20	-	20
Total	866	48	914

Analysis of Increase

Necessary Pay.....	19
Inflation.....	12
Restoration of FY 1985 2% Reduction....	17

ABSTRACT - Founded in 1967, the Anacostia Neighborhood Museum (ANM) serves as a national resource for exhibition, scholarly and applied research, historical documentation, and interpretive and educational programs related to black history and culture in America. Located in the Anacostia neighborhood in the Southeast section of Washington, D.C., (approximately six miles from the Mall), the Museum currently occupies public and exhibition space in the old Carver Theater (2405 Martin Luther King, Jr. Avenue) and an Exhibits Laboratory Building at Fort Stanton Park. No program increase is requested for FY 1986. Necessary pay of \$19,000 is required for existing staff and an amount of \$12,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$17,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Anacostia Neighborhood Museum is a national prototype for scholarly and applied research, historical documentation, exhibition, interpretation and educational programs as they relate to the experience of black Americans and their contributions to science, history and the arts. The Museum serves as a source of materials on black American history for similar institutions around the Nation and demonstrates to other museums and neighborhoods new and innovative ways of inviting non-traditional museum audiences into the worlds of science, history and the arts. Moreover, the Museum serves as a cultural resource for the people of Anacostia.

Presenting American history from a black perspective through its research, exhibitions and educational activities, the Anacostia Neighborhood Museum also cooperates with other Smithsonian units to strengthen their own capabilities in research and exhibition on subjects related to black history and culture. The Museum is an active member of the Afro-American Museum Association and works with other museums and research institutions, universities, and archives throughout the United States to enhance the awareness and appreciation of the contributions of black history and culture to American society.

Research - During FY 1984 and FY 1985, the Anacostia Neighborhood Museum pursued a program of research in support of its exhibitions, public information and publishing activities. The scripting and artifact search was completed for two exhibitions: "Black Women: Achievements Against the Odds," a panel show presenting the adversities, contributions, and varied roles of a representative group of American black women; and "The Renaissance: When the Negro Was in Vogue," which highlighted the achievements of black Americans in the arts and culture during the "New Negro Movement" of the 1920s. "Black Women," originally developed as a traveling exhibit by the Museum in 1975, was updated and expanded for this exhibition.

In FY 1984, the Anacostia Neighborhood Museum engaged in joint research efforts with other Smithsonian bureaus including: a critical review of historically important photographic portraits of notable black Americans (taken by Carl Van Vechten, a famous early 20th-century literary figure) for an exhibition at the National Portrait Gallery, entitled "O Write My Name: American Portraits of Harlem Heroes"; and the initial phase of a systematic survey of artifacts in the collections of the National Museum of American History relating to black history. Research by Museum staff contributed to the scholarly work of the authors of several publications, including We Are Your Sisters, a biographical study of 19th-century black women; City of Magnificent Intentions, the first textbook written on the history of the Nation's Capital for use in the District of Columbia public schools; and the catalogue for the National Museum of American Art's exhibition "The Capital Image: Painters in Washington, 1800-1915."

Traveling Exhibitions - In cooperation with the Smithsonian Institution Traveling Exhibition Service (SITES), the Anacostia Neighborhood Museum has produced several traveling exhibitions related to the history, culture, and achievements of black Americans, including "Out of Africa," "Blacks in the Westward Movement," "Black Women: Achievements Against the Odds," and "The Frederick Douglass Years." As part of the commemoration of the Franklin Delano Roosevelt Centennial, Anacostia presented "Mary McLeod Bethune and Roosevelt's 'Black Cabinet'," which became a traveling exhibit after its showing at the Museum. These traveling exhibits allow the Museum to reach diverse national audiences with the results of its research and exhibition programs.

Exhibitions at the Museum - During FY 1984, "Through Their Eyes: The Art of Lou and Di Stovall," presenting the work of two local silkscreening artists (September 1983 to March 1984), and "Black Wings: The American Black in Aviation," a third copy of the NASM exhibition, enhanced by selected artifacts and memorabilia which Anacostia produced to be traveled by SITES (April to August 1984) were presented. During FY 1985, exhibitions include "Black Women: Achievements Against the Odds" (October 1984 to June 1985), and "The Renaissance: When the Negro Was In Vogue" (scheduled for exhibition from September



1985 through December 1986). "Black Women" presents the adversities, contributions, and varied roles of a representative group of 113 American black women, from the noted slave-poetess Phillis Wheatley (b. 1753) to the distinguished former Congresswoman Barbara Jordan. The panel show also provides biographical and historical data, characteristic quotations, and little known vintage photographs of the women highlighted. "The Renaissance" will document and highlight the achievements of the black literary community during the 1920s, including the influences of the leading protagonists and supporters of the "New Negro Movement" and its subsequent impact on the arts. This exhibition, greatly enhanced by artifacts loaned by major archival repositories, the Library of Congress, and private collectors and patrons of the arts, also will feature audio-visual presentations of interest to a diverse museum audience.

Exhibition plans for FY 1986 and following years will continue to emphasize both black history and the role of blacks in American art and culture. Among the subject areas to be explored are: "The Black Church," documenting the development of the black church in America from 1787 to 1900; "Black Inventors"; and "P.H. Polk: A Man and His Work," featuring photographs taken by Prentice H. Polk (b. 1898), highlighting southern folklife. Two art shows also will be presented, including one in conjunction with the D. C. Art Association.

Public Education and Orientation - During FY 1984 and FY 1985, Anacostia Neighborhood Museum staff, with the assistance of volunteers, conducted tours for elementary and secondary school groups, gave lectures to museum audiences and academic and professional groups, and developed special presentations and interpretive programs to amplify and support exhibits. In FY 1984, a new program, "The Lunch Box Forum," brought together community residents, colleagues from other Smithsonian museums and other interested individuals in an informal discussion series covering topics of interest to the black community. "Forum" topics have included "Afro-American Migration: 1915-1940," "Coming in 1985: A National Magazine of Afro-American Culture," "Future Plans for the National Museum of African Art," and the experiences of an original member of the Tuskegee-trained 99th Fighter Squadron.

During FY 1984, the Museum sponsored a seminar for a group of District of Columbia public school social studies teachers to commemorate the 30th anniversary of the Supreme Court decision in Brown vs. Board of Education which ended segregation in public schools. An educator's preview of the "Black Wings" exhibition featured the participation of several of the members of the 99th Fighter Squadron, who discussed their own experiences and those of other black pilots. In May 1984, a seminar was conducted for a group of international museum educators, visiting the United States under the sponsorship of the United States Information Agency, to learn about the Museum's educational goals, current programs, and future plans.

Museum Facilities - With funding provided as part of the Restoration and Renovation appropriation in FY 1984 and FY 1985, construction of the addition to the Museum's Fort Stanton facilities will begin in FY 1985. The new addition will provide safe, dry, and environmentally controlled exhibition areas adjacent to the Museum's Exhibits Laboratory and will include an exhibits staging area that will minimize the period that the Museum must be closed during the dismantling or installation of an exhibit. The Museum's public exhibition and education facilities then would be relocated to the Fort Stanton building and the lease of the old Carver Theater would be terminated. It is anticipated that the savings realized by terminating the lease of the Carver Theater will be applied initially to equipping and furnishing the new exhibit area, and in subsequent years to enhancing exhibit production capability.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funds are provided by an annual allotment to cover the salary and benefits costs of a woodcrafter. During FY 1985, this woodcrafter will work on "The Renaissance" exhibition, the largest in the history of the museum. Additional monies are derived from exhibit rentals, and donations, and are used to purchase supplies and materials to support the Museum's programs and community outreach activities.

Restricted Funds - These are in the form of gifts from individuals, organizations and corporations and are designated for the support of specific Museum programs.

ASSISTANT SECRETARY FOR PUBLIC SERVICE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
		FTP**	Amount	FTP**	Amount					
FY 1984 Actual	27	1,183	28	1,507	-	314	-	60	-	-
FY 1985 Base	24	1,220	30	1,445	-	150	-	-	-	-
FY 1986 Estimate	24	1,278	33	1,632	-	151	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	24	0	24
11 Personnel Compensation.....	854	21	875
12 Personnel Benefits.....	107	4	111
21 Travel.....	12	1	13
23 Rent, Communications & Utilities....	36	1	37
24 Printing & Reproduction.....	35	3	38
25 Other Services.....	121	16	137
26 Supplies & Materials.....	38	7	45
31 Equipment.....	17	5	22
Total	<u>1,220</u>	<u>58</u>	<u>1,278</u>

Analysis of Increase

Necessary Pay.....	25
Inflation.....	9
Restoration of FY 1985 2% Reduction....	24

ABSTRACT - The Office of the Assistant Secretary for Public Service encourages and supports the development of programs to advance the Institution's objectives in education, publication, folklife programs and public information. The Office also advises the Secretary on policy issues and program planning for Public Service activities, and undertakes special local, national and international projects. Included in this line item are the Office of Telecommunications, the Visitor Information and Associates' Reception Center, and the Office of Public Affairs. No program increase is requested for FY 1986. Necessary pay of \$25,000 is required for existing staff and an amount of \$9,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$24,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - I. Immediate Office, Assistant Secretary for Public Service: With base resources of 5 workyears and \$256,000, the Office of the Assistant Secretary for

Public Service coordinates and supervises the Institution's educational and public service programs, and advises the Secretary on the development of policies and activities for these programs. The bureaus and offices reporting to the Assistant Secretary include the Office of Telecommunications, the Visitor Information and Associates' Reception Center, and the Office of Public Affairs (which are all included in this line item); the Smithsonian Institution Press; Smithsonian magazine; the Office of Folklife Programs; the Office of Smithsonian Symposia and Seminars; and the Office of Elementary and Secondary Education.

II. Office of Telecommunications: With base resources of 5 workyears and \$216,000, the Office of Telecommunications assists in developing plans for Smithsonian policies and objectives in telecommunications. The Office also develops and produces television and radio programs and films for distribution to public and commercial broadcasting outlets and to educational and civic organizations.

The Office produces three major program series: "Here at the Smithsonian," an award-winning series of two-minute video features seen on 65 television stations nationwide; "Radio Smithsonian," a weekly, 30-minute series heard on 70 public and commercial radio stations in the United States, the Voice of America, and on the United States Armed Forces radio network overseas and in Canada; and "Smithsonian Galaxy," a popular series of short radio features which reaches 230 stations twice a week in the United States, Canada, New Zealand, and the Virgin Islands. This series also is broadcast on the United States and Canadian Armed Forces Radio Network overseas. The Office is also involved with "Smithsonian World," a new Public Broadcasting Service (PBS) series of prime-time hour-long specials co-produced by WETA-TV and the Smithsonian Institution, which premiered on public television stations throughout the country in January 1984. The series' second season is scheduled to begin in April 1985.

During FY 1984, the production of "The Work of Peace," commemorating the bicentennial of the Treaty of Paris, was completed. The film is being distributed widely throughout the United States and abroad to mark the anniversary of the Treaty. A new one-hour film, "The Sea: A Quest for Our Future," dealing with coral reef research conducted by the Smithsonian's Marine Systems Laboratory, was completed and broadcast by the PBS network. A half-hour version now is being edited for use in schools and other educational institutions. To commemorate the Harry S Truman Centennial, the Office produced a short film on the Berlin Airlift for an exhibit at the National Air and Space Museum. Other major film and video projects finished in FY 1984 included: "Yesterday's Tomorrows: Visions of the Future on Film," which accompanies the Smithsonian Institution Traveling Exhibition Service (SITES) exhibit "Yesterday's Tomorrows"; and a half-hour videotaped program featuring Pulitzer Prize-winning author Edmund Morris in a conversation about his work, The Rise of Theodore Roosevelt, with the National Portrait Gallery. The Office also produced a five-minute visitor orientation videotape for the Visitor Information and Associates' Reception Center, and in conjunction with the Anacostia Neighborhood Museum, a 15-minute film on Washington silk-screen artist Lou Stovall.

The Smithsonian has received national and international recognition for its broadcast program series and films. Recent awards presented to the radio and television series include the 1984 Houston International Film Festival Gold Award (for "Here at the Smithsonian"), and the National Association of Government Communicator's Gold Screen Award for 1984 (received by both "Radio Smithsonian" and "Smithsonian Galaxy"). "American Picture Palaces," a 1983 film production documenting the "Golden Age" of movie theaters of the 1920s and 1930s, received 14 awards including Best Film of the Festival from the Fourth International Festival of Architecture and Planning, the Red Ribbon from the American Film Festival, and the Gold Award of the International Film and TV Festival of New York.

Two special projects are being developed during FY 1985, with production tentatively planned for FY 1986. The first is a proposed children's television series, to consist of

26 half-hour programs designed for ages 9-12, which will utilize the resources of all Smithsonian bureaus. The second is a 90-minute film on the great U.S. Exploring Expedition of 1838-1842, known as the Wilkes Expedition. The film will tell the dramatic story of the voyage and of its scientific accomplishments which provided the foundation for the Smithsonian's natural history collections.

III. Visitor Information and Associates' Reception Center: With base resources of 2 workyears and \$157,000, the Visitor Information and Associates' Reception Center (VIARC) serves as the focal point for public information about Smithsonian exhibitions, events, programs and activities. VIARC's mandate is to administer a broad range of centralized information and assistance programs. Many of the Center's programs operate seven days a week and involve the coordination and direction of large numbers of volunteers who constitute a primary source of public information and behind-the-scenes support for the Institution's information programs and for staff project assistance.

Services provided by VIARC include the staffing of information desks in ten museums by a corps of 400 volunteer information specialists; the operation of the primary telephone service for general information about the Institution, its exhibitions, programs and activities; and the provision of recorded telephone information 24-hours-a-day (Dial-A-Museum and Dial-A-Phenomenon). VIARC also serves as the primary referral point for public mail received by the Smithsonian. Volunteer lecturers present a variety of 30-minute slide/lecture programs which provide an orientation to the Institution. Behind-the-scenes tours of the Smithsonian Institution Building, which outline its history, use and furnishings are provided by docents on a regular weekend schedule. During summer months of peak visitation, additional information services are provided to visitors from mobile units, which operate along the pedestrian walkways adjacent to The Mall museums.

VIARC is responsible for the Independent Volunteer Placement Service, the registration and placement program for the Institution's workforce of over 900 volunteers who work behind-the-scenes throughout the Smithsonian, and for conducting an annual Institution-wide volunteer survey which provides necessary statistical data and forms the basis for the Institution's annual acknowledgment of volunteer support. In FY 1984, a similar program was initiated for the interns working throughout the Institution, for which VIARC developed a "Handbook for Smithsonian Interns" and two booklets, "Internships and Fellowships" and "Housing Information for Interns and Fellows."

In order to strengthen the Institution's ability to inform, orient and serve the millions of visitors to the Smithsonian each year, VIARC has developed a multifaceted program to improve the visitor information services provided by the Institution. One facet of this program has been the establishment of a nationwide pre-visit education program, which is coordinated with the Washington metropolitan area, and the national tour and travel industry. A booklet, "Planning a Smithsonian Visit: A Guide for Groups," was produced as a pre-visit information tool. During FY 1984, VIARC represented the Institution at numerous regional, national and international tourism marketplace functions, including World Travel Market, which attracted 20,000 journalists, travel writers and tour planners. As a result, the Smithsonian has received increased publicity in travel trade publications.

A second facet of this program is the development of an exterior graphic information system for visitors. In FY 1984, VIARC requested the Department of Urban and Regional Planning at George Washington University to undertake a design study for such a system as a class project. The final report and recommendations of this project, presented to VIARC in May 1984, will serve as the basis of further development of a graphic information system.

IV. Office of Public Affairs: With base resources of 12 workyears and \$591,000, the Office of Public Affairs is responsible for providing information about the

Smithsonian and its programs to the general public. The Office informs the public by means of news releases; the Smithsonian News Service; feature articles; calendars of events; radio-TV public service announcements; guides; visitor brochures and other publications; contacts with individual journalists; and news conferences. The Office also produces a monthly staff newspaper.

As part of its effort to strengthen interest in and knowledge of the Institution, and particularly of its multifaceted research and exhibitions, the Office of Public Affairs produces the Smithsonian News Service. This news service provides four feature articles per month on art, history and science subjects to newspapers and other media outlets across the country and abroad. The articles of Smithsonian Institution News Service are now featured in newspapers and other publications with a total circulation of more than 40 million readers.

The Office of Public Affairs also produces Research Reports, a periodical published three times a year. The publication continues to be devoted to reports on research at the Institution in the arts and history as well as science. The publication reaches more than 34,000 readers including the scholarly community, foundations, universities, and Smithsonian contributing members.

In FY 1984, there were new expressions of recognition of the work of the Office of Public Affairs and its staff. The Smithsonian News Service swept the News Features category in the Blue Pencil awards competition of the National Association of Government Communicators (NAGC). Research Reports won a second prize in the NAGC Newsletter category as well as an Award of Distinction in the annual Museums Publications Competition of the American Association of Museums. The Smithsonian staff newspaper, The Torch, published monthly by the Office of Public Affairs, took a first prize in the NAGC House Organ field.

In FY 1985, the Office of Public Affairs dispatched a small news team to India to produce a special package of Smithsonian News Service articles. These articles are planned for distribution in the late spring as part of the Smithsonian's contribution to the Festival of India, a nationwide event beginning in June 1985.

Also, in FY 1985, the general information brochure titled "Welcome" and the French, German, Spanish and Japanese editions of that brochure will be updated and reprinted. There also will be a general revision of a brochure for the handicapped visitor.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - I. Immediate Office, Assistant Secretary for Public Service: These funds are provided by an allotment which will cover the salary and benefits of one full-time staff member. In FY 1984, allotments were provided to support expenses associated with the Smithsonian's participation in the 1984 Edinburgh International Festival in Scotland, and planning activities for the Festival of India, which will open in the summer of 1985 and continue through 1986.

II. Office of Telecommunications: These funds are provided by allotments which support eight full-time staff members and expenses associated with the production of educational and informational materials for television, film and radio. In addition, a nominal amount of subscription fees is received to help cover distribution costs. The Office produces three ongoing series of programs which reach the American public regularly through radio and television. "Here at the Smithsonian" and "Radio Smithsonian" are financed partly by an allotment and partly by subscriber fees. "Smithsonian Galaxy" is supported by an allotment.

III. Visitor Information and Associates' Reception Center: These funds are provided by an allotment and are used primarily to support 18 full-time staff members

associated with the Center's work as the Institution's public service bureau responsible for the information and assistance activities described in the Program Statement. FY 1986 program allotments for three new positions plus support costs for the Center account for \$134,000 of the overall general fund increase between FY 1985 and FY 1986.

IV. Office of Public Affairs: Supported by Educational Outreach funds for the second consecutive year, the Office of Public Affairs conducted an outreach program designed to increase minority visits to the Smithsonian and participation by members of minority groups in Smithsonian activities. In FY 1984, the program included production of a television Public Service Announcement featuring Colonel Guion (Guy) Bluford, the first black American astronaut in space. FY 1984 funds also were used to produce a brochure entitled "Explore Your Heritage at the Smithsonian," which outlined Smithsonian exhibitions of particular interest to black Americans. In FY 1985, the Office plans to produce a second television Public Service Announcement, as well as radio advertisements on exhibitions of interest to minorities. A special emphasis is planned to attract Hispanic Americans.

The Office of Public Affairs continues its efforts to remind the broad American public coast-to-coast of the value of the Smithsonian experience. A television Public Service Announcement featuring the well-known actress Sandy Duncan, and designed for distribution in spring 1985, emphasizes the Smithsonian's attractiveness for children. A general Public Service Announcement on the Smithsonian for tourists is planned for production in FY 1985.

The Office of Public Affairs in FY 1984 also produced the Institution's first general brochure, on "Science at the Smithsonian." The 30-page brochure covered current Smithsonian scientific research as well as the history and heritage of science at the Smithsonian since its founding.

Overall Special Purpose Funds: The reduction of \$164,000 in expenditures between FY 1984 (\$314,000) and FY 1985 (\$150,000) mainly results from the one-time costs of the previously mentioned Edinburgh Festival (\$57,000), funds from the Smithsonian Society (\$17,000 - Office of Telecommunications) and from the Institution's Collections Acquisition, Scholarly Studies and Educational Outreach Program (\$16,000 - Office of Telecommunications and \$42,000 - Visitors Information and Associates' Reception Center). Estimated expenditures through the Collections, Scholarly Studies and Educational Outreach Program and the Smithsonian Society have not been recorded for FY 1985 and FY 1986 which explains the variance in totals shown for those years.

Restricted Funds - Office of Telecommunications: A corporation grant enabled the Office to supervise production of a film on the research of tropical reefs in the Caribbean (actual expenditures of \$46,000 in FY 1984).

SMITHSONIAN INSTITUTION PRESS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1984 Actual	28	1,023	33	10,670	-	-	-	6	-	-
FY 1985 Base	29	1,097	33	12,460	-	-	-	-	-	-
FY 1986 Estimate	29	1,158	33	13,045	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	29	0	29
11 Personnel Compensation.....	817	29	846
12 Personnel Benefits.....	117	4	121
21 Travel.....	1	1	2
22 Transportation of Things.....	2	-	2
23 Rent, Communications & Utilities....	9	-	9
24 Printing & Reproduction.....	85	23	108
25 Other Services.....	34	2	36
26 Supplies & Materials.....	9	1	10
31 Equipment.....	23	1	24
Total	<u>1,097</u>	<u>61</u>	<u>1,158</u>

Analysis of Increase

Necessary Pay.....	33
Inflation.....	6
Restoration of FY 1985 2% Reduction....	22

ABSTRACT - The Smithsonian Institution Press is the Smithsonian's publisher. As such, the Press fulfills the following duties including acquiring, editing, designing, producing, distributing and marketing, through the Press's three main organizational divisions: (1) the University Press Division which is responsible for all scholarly works, including the federally funded monographic series and other publications with more popular appeal which can be aimed at the Trade market, usually with initial private funding; (2) the Direct Mail Books Division, which produces and markets Smithsonian-related books that are illustrated extensively, popularly written and geared toward the National Associates and other laypersons; and (3) the Recordings Division, which has produced more than 50 releases covering a musical range from American popular song and jazz to Renaissance classics, many of which are performed on original instruments from the Institution's own collection. In addition, the Press is the Institution's official agent



in procuring printing services from the U.S. Government Printing Office, in creating forms, guides, instructions and the like, as well as providing professional assistance to Smithsonian authors upon request. No program increase is requested for FY 1986. Necessary pay of \$33,000 is required for existing staff and an amount of \$6,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$22,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The operations of the Press, like its organization, have had to change and improve in order to meet the burgeoning demands of the past several years. A brief exposition of the three editorial divisions of the Press follows.

The University Press Division actively seeks, acquires, and develops for publication and sale scholarly manuscripts by qualified authors within and outside the Institution on subjects related to Smithsonian interests and activities, principally in the fields of air and space, anthropology, fine arts, history, the natural sciences, and science and technology. Acquisition and publication of these books are funded from the non-appropriated Trust funds of the Institution and supplemented, when obtainable, from outside gifts and grants. Thirty-seven scholarly books of this kind were published by the Press in FY 1984.

Additionally, the University Press Division is responsible for publishing all government-funded publications of the Institution and some privately funded publications. In FY 1984, this amounted to 100 federally-funded publications and 260 trade or Trust-funded publications. These include scholarly monographs in the ten Contributions and Studies series, exhibition catalogues and checklists, annual reports (of the American Historical Association and of individual Smithsonian units as well as the inclusive Smithsonian Year), booklets, newsletters, posters, invitations, stationary and administrative forms.

Long-range plans call for gradual growth of the University Press Division from 30 to 40 books a year to about 75 books a year. Emphasis will be placed on scholarly publications with major expansion in anthropology, music, art and art history, American studies and museum management. Careful attention will continue to be given to electronic publishing (data base retrieval) and video cassettes/discs.

The Direct Mail Books Division, which published under the Smithsonian Books imprint, is charged with the publication and sale (primarily to Smithsonian Associates) of well-illustrated books on topics related to Smithsonian collections, activities and interests. This Division has published an average of two highly successful books per year, with average sales of 50,000 copies per book. Total copies sold in FY 1984 exceeded 241,000. It should be noted that the University Press Division and the Direct Mail Books Division engage, where appropriate, in copublishing and codistributing arrangements with a number of domestic and foreign publishers, and have developed an active and proficient marketing capability worldwide. The Direct Mail Books Division will examine whether it should expand from one or two popular books a year to three or four. This determination will be based on careful market analysis.

The Recordings Division, formerly an element of the Division of Performing Arts, but made a component of the Press in 1982, publishes sound recordings in disc and cassette formats under the Smithsonian Collection of Recordings imprint. Nearly all of the Division's publications present musical performances that illuminate facets of American culture, or otherwise relate to Smithsonian programs. A majority are compiled from pre-existing historical recordings, while a small number consist of performances expressly recorded for the Smithsonian. As with the Direct Mail Books Division, Smithsonian Associates are the primary constituency for publications of the Recordings Division. Large anthologies suitable for direct mail promotion are published at the rate of one or

two per year. A typical first year's sale for such an anthology is in excess of 40,000 copies. The Division also will explore the feasibility of releasing two or three scholarly, archival records a year. Regardless of their size, popularity or degree of specialization in subject matter, all Smithsonian recordings offer program selections and include texts that draw upon the high level of research and scholarship uniquely available to the Smithsonian.

In addition to these pursuits, the Press is responsible for other publishing services including catalogues, checklists, annual reports, booklets, newsletters and posters. These total more than 300 individual jobs a year and demand the equivalent editorial, design and production services accorded the more conventional publications such as Trade books, scholarly monographs and recordings. Another service more recently undertaken by the Press is that of "electronic publishing," with expertise being acquired and increased daily in such innovative areas as manuscript storage and retrieval, editing on computer terminals, automatic typesetting from edited floppy discs, and issuance of archival photos on optical discs.

Basic scientific and historical research results published by the Press in FY 1984 with Federal funds were Smithsonian Contributions and Studies series in a wide range of categories including "Field and Laboratory Investigations of Meteorites from Victoria Land, Antarctica" (Earth Sciences); "The Carnivora of the Edson Local Fauna (late Hemphillian), Kansas" (Paleobiology); "Ecology and Social Organization of the Maned Wolf (Chrysocyon brachyurus)" (Zoology); and "United States Women in Aviation, 1919-1929" (Air and Space). Among the titles issued in the first quarter of FY 1985 were "History of Botanical Exploration in Territorio Federal Amazonas, Venezuela" (Botany); "The Atlantic Barrier Reef Ecosystem at Carri Bow Cay, Belize, III" (Marine Sciences); "Evolutionary Differentiation: Differentiating Gold-banded Skippers" (Zoology).

Federal publishing plans for FY 1985 and FY 1986 will be determined mainly by the Press's client bureaus and offices, which depend in turn on the allocation of funds made available to these bureaus for publishing purposes.

Books published by the Press in FY 1984 with nonappropriated funds include: The Eagle Aloft: Two Centuries of the Balloon in America; The Birds of China; One Hundred Masterpieces of American Painting from Public Collections in Washington, D.C.; Shrimps, Lobsters, and Crabs of the Atlantic Coast; African Islam; Treasures of the Smithsonian; and Raised in Clay: The Southern Pottery Tradition. Books published in the first quarter of FY 1985 include: American Issue: The U. S. Postage Stamp, 1842-1869; Drawn from Nature: The Botanical Art of Joseph Prestele and His Sons; and The World's Whales. Books planned for the remainder of FY 1985 include: Phantom in Combat; Sculpture and the Federal Triangle; and Space, Time, Infinity: The Smithsonian Views the Universe. Additionally in FY 1984, the Press's Recordings Division published the album "Big Band Jazz" and has produced in FY 1985 the album "American Popular Song: Six Decades of Songwriters and Singers."

During FY 1984, the Smithsonian book program continued to receive acclaim for its editorial, design, and production capability and was accorded recognition by the National Association of Government Communicators (Blue Pencil Awards); the Association of American University Presses (AAUP Book Show Award); Art Directors Club of Metropolitan Washington; American Association of Museums (Museum Publications Competition); and the Aviation/Space Writers Association.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are derived from the sale of Trust-funded books, recordings, royalties and special publishing services. They support nine staff members within the University Press Division, 15 members of the staff

of the Direct Mail Books Division, and nine members of the Recordings Division staff. These funds also support the necessary services required to develop, market, warehouse, and distribute records and scholarly and general-interest books which are published in connection with the Institution's research, collections, exhibitions, and other programs.

ASSISTANT SECRETARY FOR MUSEUM PROGRAMS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
FY 1984 Actual	18	631	-	48	1	209	3	212	-	1
FY 1985 Base	19	712	-	14	-	53	3	483	-	2
FY 1986 Estimate	19	755	-	15	1	57	3	348	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	19	0	19
11 Personnel Compensation.....	517	23	540
12 Personnel Benefits.....	67	3	70
21 Travel.....	16	3	19
22 Transportation of Things.....	11	3	14
23 Rent, Communications & Utilities....	19	1	20
24 Printing & Reproduction.....	2	-	2
25 Other Services.....	19	4	23
26 Supplies & Materials.....	7	1	8
31 Equipment.....	54	5	59
Total	<u>712</u>	<u>43</u>	<u>755</u>

Analysis of Increase

Necessary Pay.....	24
Inflation.....	5
Restoration of FY 1985 2% Reduction....	14

ABSTRACT - The Office of the Assistant Secretary for Museum Programs assists and advises the Secretary on the coordination and direction of the Institution's central museum support activities; supervises special projects affecting Smithsonian museum operations and facilities; and maintains a liaison with national and international museum organizations. The Office also furnishes advice and technical assistance to other museums; performs studies on the effectiveness of museum exhibitions, programs and management methods; conducts training seminars and workshops for museum personnel; and disseminates technical information on museum practices. Also included in this line item is the Office of Museum Programs. The Offices of Horticulture and South Group Buildings Management, which report to this Office, are included in the Facilities Services section of this budget request, since their functions relate closely to those of the Office of Plant Services. No program increase is requested for FY 1986. Necessary pay of \$24,000

is required for existing staff and an amount of \$5,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$14,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - I. Immediate Office, Assistant Secretary for Museum Programs: With base resources of 7 workyears and \$358,000, this Office administers, oversees, reviews and supports: the Office of Museum Programs; the Office of the Registrar; the Office of Exhibits Central; South Group Buildings Management; the Conservation Analytical Laboratory; the National Museum Act; Smithsonian Institution Traveling Exhibition Service (SITES); the Office of Horticulture; Smithsonian Institution Libraries; and Smithsonian Archives.

In addition, the Office coordinates and supports projects related to the development and improvement of facilities, operational methods, and exhibition programs of the Smithsonian museums, including the Museum Support Center (MSC) and the Collections Management/Inventory Program, which, since FY 1979, has entailed the accelerated inventory effort and the process of refinement and reconciliation of collections records. The Office has worked closely with the General Services Administration, the architects and the museums that occupy the facilities of the Museum Support Center in the development of specifications for the storage equipment to be used, the planning for the transfer of the collections, and the implementation of the operating requirements.

Within the museum profession, the Office of the Assistant Secretary works closely with museum organizations and professionals, both nationally and internationally, among which are the American Association of Museums and the International Council of Museums. This involvement promotes the scholarship, exhibition, and educational functions of museums; encourages the development and application of new techniques for museum administration and practices; and supports museum training programs, particularly those in conservation.

II. Office of Museum Programs: With base resources of 12 workyears and \$354,000, the Office of Museum Programs conducts specialized services and training programs for museum personnel from American and foreign museums. These include programs designed particularly for the Native American community; internships in museum practices; and visits to the Smithsonian for museum professionals. The Office plans and conducts special conferences and consultations on museum matters and provides program supervision for the Museum Reference Center, which is the major library source for museological information in the United States. The Office also produces informational and audio-visual presentations on conservation and museum practices for distribution to museums and educational organizations. Moreover, the Office currently is involved in a three-year program and study to investigate how museums can increase their educational contributions to their communities. The Museum Training Program offers workshops and seminars taught primarily by Smithsonian staff for individuals employed by museums throughout the United States and abroad. These courses concentrate on improved museum practices in such areas as: management; design and production of exhibitions; conservation awareness; educational programming; registration methods and automation; public relations and publications; audiovisuals; library and archival organization; and curation and collections management. New subjects offered and planned for FY 1985 are: the uses of horticulture programming in a museum setting; families in museums; and older adults and museums. In FY 1984, 30 workshops attracted approximately 650 museum professionals.

The onsite program of 14 workshops conducted in 1984, at no direct cost to the Institution, is continuing in 1985. This program makes it possible to present training opportunities through cooperating museums to personnel of local and regional museums who are unable to attend the workshops given in Washington, D.C. Since 1977, more than 800 Native Americans and their museum and cultural institutions have been served through

workshops, internships, publications, specially produced slide-tape programs and other technical assistance activities geared to the special needs of this community. Since 1974, the audio-visual conservation information program has produced 112 programs and distributed over 6,500 video tape and slide cassette programs illustrating and explaining museum practices and techniques with emphasis on conservation, care of collections and education. This is a unique service in the United States and, as interest in conservation grows, the demand for use of the program is expected to increase.

In FY 1984, more than 80 museum professionals and students from the United States and other countries participated in the Museum Practices Internship Program conducted by the Office in cooperation with various bureaus and offices of the Institution. Interns were placed with those Smithsonian units that could provide the appropriate experience for the individual. The number of such interns has been growing and is expected to increase during FY 1985. A new program granting awards to minority museum professionals was initiated in June 1984. In 1984 and 1985, 12 minority museum professionals will be awarded up to \$500 each to defray the cost of travel to Washington, D.C., so that they might attend a workshop of their choice and spend a second week in residence at the Institution as a Visiting Professional. The awards will be offered again in 1985 and 1986. In FY 1984, the Office of Museum Programs, with funding from and in cooperation with the United States Information Agency (USIA), planned and organized the fifth annual 30-day tour of United States museums for foreign museum professionals. The theme of this tour was "Educational Programs in Museums." The success of this effort led the USIA to request that the Office of Museum Programs organize a second tour program on "Museum Administration" in the same year. A third tour is planned for 1985 on "Collections: Management and Preventive Care."

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The Office of Museum Programs has two revolving Trust funds for training and for the audio-visual loan program to accommodate small fees for services. A separate fund records the sale and the biennial revision of the Office of Museum Programs' publication Museum Studies Programs in the United States and Abroad, and in FY 1984, an allotment for the Awards for Minority Museum Professionals was provided (estimated expenditure of \$6,000 in FY 1985 and in FY 1986). Funds also were provided for the "Treasures from the Shanghai Museum--6,000 Years of Chinese Art" exhibition participation fee (expenditures of \$150,000 in FY 1984) and the 1984 meeting of the American Association of Museums (actual expenditures of \$39,000 in FY 1984).

Restricted Funds - The Office of Museum Programs received a grant of \$1.1 million from the Kellogg Foundation in 1982 for a three-year project to "expand the educational influence of museums." The purpose of the grant is to enable the Smithsonian to assume a leadership role in the establishment of a network of museums in the United States to examine issues and provide means of implementation so that museums can increase their educational impact in their communities. All aspects of museum operations are being explored with decision-makers from museums and with representatives from other educational resources. Colloquia, regional workshops, community-resources workshops, residencies, and video tapes are being planned and organized to involve over 400 museums (estimated expenditures of \$482,000 in FY 1985 and \$347,000 in FY 1986).

OFFICE OF THE REGISTRAR

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**		Amount	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	2	90	-	-	-	-	-	-	-	-
FY 1985 Base	2	96	-	-	-	-	-	-	-	-
FY 1986 Estimate	2	102	-	-	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	2	0	2
11 Personnel Compensation.....	44	2	46
12 Personnel Benefits.....	7	-	7
21 Travel.....	3	-	3
23 Rent, Communications & Utilities....	7	-	7
24 Printing & Reproduction.....	-	1	1
25 Other Services.....	7	1	8
26 Supplies & Materials.....	2	-	2
31 Equipment.....	26	2	28
Total	96	6	102

Analysis of Increase

Necessary Pay.....	2
Inflation.....	2
Restoration of FY 1985 2% Reduction....	2

ABSTRACT - The Office of the Registrar is responsible for the development, oversight and coordination of the Smithsonian's collections management policies. This entails advising management on accountability, procedures, and information management techniques. To this end, the Office of the Registrar is charged with supervising cyclical collection inventories and inventory-related activities such as the reconciliation of findings with existing records. No program increase is requested for FY 1986. Necessary pay of \$2,000 is required for existing staff and an amount of \$2,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$2,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - In 1976, the Office of the Registrar shifted from an emphasis on record keeping to an emphasis on improving collections management policies and practices in all Smithsonian bureaus.

In FY 1977, Institutional recognition of the critical role of collections inventory control resulted in responsibility being given to the Office for the development and application of a basic inventory policy to guide baseline collection inventories in the Smithsonian museums and subsequent cyclical reinventories. This entails involvement in the reconciliation of inventory findings with existing records and the enhancement of all records to provide improved collections accountability. The Office also monitors collections management policies in the Institution's museums and provides coordination for the processing of policy documents. To provide further collections support, the Registrar's Office began conducting in FY 1978 a series of seminars on the information management aspects of collections management. In addition, workshops on collections management are held for museum professionals throughout the country at least twice a year in cooperation with the Office of Museum Programs.

Other responsibilities of the Office of the Registrar include coordinating the Smithsonian Registrarial Council, through which interbureau registrarial business is conducted and cooperative procedures are developed. It also is responsible for maintaining contact with national and international organizations concerned with the application of computers to collections management functions, and with other museums involved in the development of systems for similar applications.

The crucial role of records in the inventory process underscores the irreplaceable nature of the Institution's collections records. Since information cannot be added to microfiche, data generated by the use or movement of objects necessitates the creation of new records. The cumbersome nature of this procedure has led the Office of the Registrar, in conjunction with the museums, to investigate the use of new technologies to generate and to maintain security copies of collections records.



CONSERVATION ANALYTICAL LABORATORY

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	27	1,494	-	-	-	1	-	-	-	-
FY 1985 Base	36	1,787	-	-	-	-	-	-	-	-
FY 1986 Estimate	40	2,197	-	-	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	36	4	40
11 Personnel Compensation.....	1,093	182	1,275
12 Personnel Benefits.....	126	18	144
21 Travel.....	42	-	42
22 Transportation of Things.....	23	4	27
25 Other Services.....	266	45	311
26 Supplies & Materials.....	120	24	144
31 Equipment.....	117	137	254
Total	<u>1,787</u>	<u>410</u>	<u>2,197</u>

Analysis of Increase

Necessary Pay.....	40
Inflation.....	23
Restoration of FY 1985 2% Reduction....	36
Program Funds.....	311

ABSTRACT - The Conservation Analytical Laboratory (CAL) performs research on the conservation related properties of materials, the improvement of treatment technology, and the extraction of information of historical importance from the materials' technical record. Within these areas of interest it also provides Institution-wide support to conservators and curators in the Smithsonian museums.

CAL advises and assists the Smithsonian and other museums in the study, preservation and conservation of objects and artifacts of artistic, scientific, cultural and historical importance; conducts basic research in conservation, by studying the physical characteristics of materials, the effects of environmental factors and the chemical processes involved in the deterioration of objects, their material make-up and their relationship to the society that produced them. CAL also conducts the Conservation Training Program at the Museum Support Center (MSC) which includes advanced conservation training,

supports workshops and seminars and provides other opportunities for the dissemination of the latest knowledge in the field of conservation to museums and research professionals throughout the United States and the world. At the end of FY 1983, the Conservation Analytical Laboratory relocated from its facilities on The Mall to new facilities at the Museum Support Center. For FY 1986, an increase of 4 workyears and \$311,000 is requested to provide additional staff expertise for CAL's planned growth of programs and responsibilities in conservation science and archaeometry at the MSC (4 workyears and \$200,000); and to establish an adequate equipment base to enable CAL to conduct its research (\$111,000). Necessary pay of \$40,000 is required for existing staff and an amount of \$23,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$36,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Conservation Analytical Laboratory provides a specialized facility at the Smithsonian devoted to all aspects of museum conservation. CAL provides scientific examination of objects, provides treatment for their protection and preservation, and performs analyses of objects to develop scientific and historical data about collections. Furthermore, CAL gathers and disseminates information to assist museums in the care of their collections; advises on the environmental conditions within Smithsonian museums where valuable objects are displayed or stored; and conducts and provides assistance for conservation training programs.

CAL's activities are carried out by three departments - Conservation Treatment, Conservation Science, and Archaeometry. CAL's unique combination of research and practical conservation work enables the knowledge gained from state-of-the-art scientific research to be applied to the actual treatment of objects. Moreover, the diversity of the objects treated and the variation of their state of preservation provide a unique opportunity to develop the experience needed to define directions for scientific research in conservation.

Conservation Treatment - Conservation treatment is provided at CAL for objects presenting special problems or requiring scientific analysis by conservation scientists and use of more specialized equipment than is available to the museums.

Among the items treated during FY 1984, were many paper objects, including work for the exhibition commemorating the building of the Brooklyn Bridge, an Early American over-mantel painting from the National Museum of American History, stair-riser panels painted by James McNeil Whistler from the Freer Gallery of Art, and wall paintings from the studio of Christian Herter in the Smithsonian Institution Building Collections. Numerous objects, including two bronzes from the Sackler collection, were treated to prepare them for travel and display in the exhibition "Treasures of the Smithsonian." Several ethnographic objects were conserved in the exhibition, "The Yak," at the Renwick Gallery. The bronze statue of Joseph Henry on The Mall was cleaned and waxed to protect it against environmental hazards. CAL conservators presented papers at several major national and international conservation meetings.

General preservation activities, including fumigation of infested objects and environmental monitoring in various museums and bureaus, continued. In FY 1984, CAL conducted fumigation work requested by six Smithsonian museums, undertaking 12 fumigation treatments. Using 85 hygrothermographs placed in critical areas, CAL monitors the environmental conditions of collections in 12 Smithsonian buildings, including the Cooper-Hewitt Museum in New York City.

Conservation Science - The Conservation Science Department continues to serve as both a research and a service laboratory. Research activities relate to conservation problems of broad interest to conservators and other museum staff, and service activities involve chemical and physical analyses to provide data for technical study of objects in the Institution's collections for their preservation.

During FY 1984, conservation scientists investigated the surface treatment of concrete floors and recommended measures to make them suitable for storage of museum objects. Another study involved detection in the atmosphere of corrosion inhibitors used in air conditioning systems and their potential effect on museum objects. Studies continue on the interaction of architectural design and air conditioning in museum structures, particularly in historic and older buildings. A reevaluation of pest control methods, with a more critical view of their effects on objects and the environment, also is being undertaken. Research results prepared for publication included papers on the use of varnish on outdoor statuary, controlled temperature display cases, glue used in an American Indian bow, salt migration in fibrous materials, replication of delicate embossed paper, and the microclimate of a museum with particular reference to the restoration of historic structures. Staff members prepared lectures on various subjects such as climate control and on aspects of protein chemistry of interest to conservators and presented papers on several major national and international conservation meetings.

For research in conservation and for information purposes, CAL maintains and constantly adds to a large collection of relevant reprints from professional journals and reports of past treatments on Smithsonian objects. These reprints (over 18,000 entries) and the many detailed CAL treatment reports require setting up cataloguing and information retrieval systems so that the needed information will be easily accessible. It is anticipated that these data will be incorporated into an international data base.

Archaeometry - The field of archaeometry integrates the scientific analysis of objects with their archaeological, anthropological, art historical and cultural backgrounds. This provides curators, archaeologists and historians with basic research data concerning materials, dates, attributions and historical technologies. Archaeometric research conducted during FY 1984 included provenance characterization of materials through neutron activation analysis of trace elements in archaeological specimens and lead isotope analysis of ancient bronzes and glasses. Other projects involved technological and analytical studies using scanning electron microscopy, thermoluminescent dating, and neutron induced autoradiography of paintings.

During FY 1985, work will continue on compositional and structural investigations of ceramics to determine manufacturing technology and provenance from samples obtained from archaeological activities in the Middle East, Mezo and Central America, the southwest United States, and Spain. Other work planned includes analysis of European Iron Age glass from the Mecklenburg Collection at Harvard University and Middle Eastern chlorite artifacts. The work of CAL's archaeometry staff is complemented by post-doctoral scientists and research associates. The scientists also use special equipment in other laboratories such as the National Bureau of Standards (NBS) and the United States Geological Survey.

The establishment of the Smithsonian Archaeometry Research Collections and Records (SARCAR) in FY 1984 was a significant initiative. SARCAR consists of collections of data and the samples from which the data were derived. It constitutes a major step forward in insuring that high quality archaeometric data and corresponding samples are available for study by all interested parties. The initial collections will be from Smithsonian projects and from projects conducted by the Brookhaven National Laboratory over the past 20 years, several of which have been done in cooperation with CAL. These collections can be used in delineating production and distribution of patterns of objects and help establish the place of manufacture of unprovenanced material. The Smithsonian will continue to cooperate with other institutions as collections are added. Because of the broad range of materials, the variety of sources represented, and the large number of institutions involved, the Advisory Board for SARCAR includes members from other institutions as well as members from the Smithsonian.

Research using the neutron-induced autoradiography of paintings is expanding. This technique provides otherwise inaccessible information about the distribution of pigments in the invisible paint layers below the surface of a painting. By cooperative agreement with NBS, CAL staff uses the NBS reactor as a neutron source. Work of art historical importance already has been carried out on paintings by Thomas W. Dewing from the National Museum of American Art and from other collections. Work which continues earlier studies conducted by the Brookhaven National Laboratory and the Metropolitan Museum of Art (MMA) on Rembrandt's painting technique is in process, with active cooperation between CAL and MMA.

Prospection involves the identification of the features of an archaeological site by physical methods. CAL has developed techniques for analysis of electromagnetically induced conductivity measurements that have made it possible to locate and assess the condition of tomb sites in Saudi Arabia and Bahrain with great accuracy. In Bahrain, unsilted tombs were located and their contents rescued for study just ahead of bulldozers and new construction. This research, and many other archaeometric projects, is carried out in cooperation with the Department of Anthropology of the National Museum of Natural History/Museum of Man.

CAL's involvement in archaeometry has resulted in participation in major national and international meetings. The 24th International Archaeometry Symposium, held at the Smithsonian, May 14-18, 1984, was organized by two CAL staff members. This five-day symposium was attended by almost 300 participants from around the world and included sessions on prospection, provenance, ancient technologies, and dating of organic and inorganic materials. CAL also cosponsors a regular series of seminars in cooperation with NBS.

Conservation Training - Training in conservation has become one of CAL's primary objectives. Senior conservation staff increasingly have become involved in teaching interns and technicians working in the Smithsonian museums. CAL also sponsors a series of videotape lectures on conservation for concerned Smithsonian staff, and staff frequently serve as faculty for workshops presented by the Office of Museum Programs for museum professionals.

During FY 1984, CAL sponsored a course on traditional Japanese paper mounting techniques, which was taught by a renowned Japanese conservator. This valuable course has been presented previously at the International Center for Conservation in Rome and thus has been available to only a very few United States conservators.

The Smithsonian is developing a training program for conservators, at various levels of expertise and experience. The director of CAL has responsibility for this program, which will utilize the staff and resources of CAL and the Institution bureaus. The first steps of the program, which will start its activities in 1985, will consist of a series of specialist and refresher courses, and the establishment of internships for both practicing conservators and students at academic training programs. The experience gained by CAL's staff during this initial phase will be of great value in the future expansion steps of the program, to be taken after careful evaluation of the needs of the profession with regard to training.

Museum Support Center Facilities - In October 1983, the Conservation Analytical Laboratory moved into its new facility in the Museum Support Center. The move to the Center provided needed laboratory and studio space for the conservation of artistic historic and ethnographic objects, works on paper, textiles, paintings and furniture, and for the installation of a wide range of scientific equipment needed for conservation research and analysis projects. MSC also houses CAL's facilities for student laboratories, seminar rooms, study space, and the MSC branch of the Smithsonian Institution Libraries.

## EXPLANATION OF PROGRAM INCREASE

For FY 1986, an increase of 4 workyears and \$311,000 is sought to enable CAL to meet its increased responsibilities and maintain its expanded activities at the Museum Support Center, through enhancement of its staff expertise in conservation science, treatment and archaeometry (4 workyears and \$200,000); and to establish an adequate equipment base to enable CAL to conduct its research (\$111,000).

CAL's programs in conservation and archaeometry require the assembly of a team of scientists and conservators possessing highly specialized knowledge and skills in very technical fields. The gradual growth of this team, projected and described over the last several years in conjunction with planning for the Museum Support Center and expanded conservation and conservation science programs, has proceeded systematically. The proposed team, however, is not complete. Presently, CAL is authorized a total of 36 workyears, 21 of which were in the original base, before the move from the quarters at the American History Building to the larger facilities at the Museum Support Center. Of these, 16 are filled by conservation scientists and archaeometrists. To continue the planned development of the research staff, an increase of 4 workyears and \$200,000 is requested for FY 1986 for three conservation scientists to provide critically needed knowledge and skills for the work in conservation research and archaeometry programs and for one conservator.

One conservation scientist, a materials scientist with special expertise in organic materials, will conduct studies in the physical and chemical properties of a wide variety of composite organic materials used in both the manufacture and conservation of museum objects. These studies will be directed at the processes which play a role in the deterioration of such materials and at their consequent behavior as a function of aging. Such understanding is fundamentally necessary to arrive at scientifically sound conservation techniques, the development of which is one of CAL's functions.

A second conservation scientist will increase CAL's capabilities in chemical analysis, necessary to provide support to conservators both within CAL and Institution-wide, as well as to archaeologists and art historians who will perform their research within CAL's archaeometry programs. This scientist also will perform analytical studies on a wide variety of artifactual materials to clarify questions of provenance and technology.

A third conservation scientist is needed to enable CAL to establish a program for scientific studies related to the conservation of photographic materials. Very little is known about the processes which play a role in the deterioration of photographic images, and hardly any systematic research is done in this area, especially with regard to those images obtained with some of the earlier variations of photographic image producing processes. With its extensive holdings of photographic materials, the Smithsonian has a large interest at stake in this regard; the research which CAL intends to perform would, however, be of great benefit to the museum field in general.

An additional conservator will supplement CAL's current staff of 11 conservators to improve its capabilities to treat objects from the collections of the Smithsonian museums which present special conservation problems, requiring the specialized facilities at CAL, and to perform research into the development and improvement of conservation treatment technology. This conservator also will assist in the development of CAL's conservation training activities.

In addition to the salary and benefit cost of these proposed positions (\$160,000), an amount of \$40,000 is requested for increased operating expenses associated with the new staff, including the purchase of laboratory glassware, chemical supplies, and specialized small equipment (such as binocular microscopes and laboratory ovens).

A further sum of \$111,000 is requested for FY 1986 to establish an adequate base for the purchase and replacement of scientific equipment, required for CAL's expanded responsibilities at the MSC. In FY 1985, additional equipment monies, approved in the prior year, were deducted from the base leaving CAL with approximately the same level of equipment funds as before the program expansion and move to the MSC. Although one-time funding has been provided for built-in equipment including laboratory instruments, CAL requires base equipment monies for recurring expenditures associated with its specialized research tasks. For FY 1986, an increase of \$111,000 is requested to strengthen CAL's current base of \$100,000 for equipment purchases. These monies are needed to update and replace worn or obsolete equipment and to purchase new equipment for increased program activities.

During FY 1986 and the next few years, CAL's major equipment replacement requirements and planned purchases include: a scanning electron microscope (\$160,000-\$200,000), a very high-powered microscope used to examine prepared samples at up to 200,000X magnification and provide an elemental chemical analysis; an energy dispersive X-ray fluorescence spectrometer (\$100,000), used to perform non-destructive qualitative and semi-quantitative elemental analysis; a fadometer (\$50,000-\$70,000), used to imitate the effect of light in measuring the aging characteristics of materials; a fourier transform infra-red spectrophotometer (\$75,000-\$100,000), used in the analysis of organic materials; a D.C. coupled plasma optical emission spectrograph (\$75,000-\$100,000), used to perform the elemental chemical analysis down to trace level concentrations; an UV-visible light spectrophotometer and colorimeter (\$25,000-\$50,000), used to measure the color properties and describe the changes in these properties of an object as a function of aging or treatment; and a temperature and humidity cabinet (\$20,000), used to imitate the effects of temperature and humidity in measuring the aging characteristics of materials. During the next few years, CAL will have to replace or update several smaller pieces of scientific equipment such as a gamma spectrometer sample changer (\$10,000-\$15,000), used in neutron activation analysis. Moreover, with CAL's expanded program in archeometry, the increased research on the study of historic technology through replication experimentation will require the purchase of such equipment as ceramic and metallurgical kilns, a forge, etc., to simulate the technological processes used by manufacturers from different locations and different periods of history.

With this equipment, CAL will be able to pursue successfully its goals of providing complex conservation treatments for the collections and specialized scientific support services to Smithsonian conservators; of performing scientific research needed to gain a better understanding of the conservation-related properties of materials and to improve conservation techniques and practices; and of participating actively in a coordinated program of varied archaeometric research projects.

SMITHSONIAN INSTITUTION LIBRARIES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
			FTP**	Amount	FTP**	Amount			FTP**	Amount
FY 1984 Actual	97	3,759	9	309	-	11	-	17	-	-
FY 1985 Base	93	4,262	9	304	-	-	-	6	-	-
FY 1986 Estimate	96	4,813	10	319	-	-	-	6	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	93	3	96
11 Personnel Compensation.....	2,375	205	2,580
12 Personnel Benefits.....	297	24	321
21 Travel.....	21	2	23
22 Transportation of Things.....	9	3	12
23 Rent, Communications & Utilities....	57	-	57
24 Printing & Reproduction.....	147	15	162
25 Other Services.....	394	239	633
26 Supplies & Materials.....	432	28	460
31 Equipment.....	530	35	565
Total	<u>4,262</u>	<u>551</u>	<u>4,813</u>

Analysis of Increase

Necessary Pay.....	103
Inflation.....	65
Restoration of FY 1985 2% Reduction....	86
Program Funds.....	297

ABSTRACT - The Smithsonian Institution Libraries (SIL) is a research library, providing information services to support the scholarly, exhibition, public service and education programs of the Smithsonian, as well as the work of scholars outside the Institution. In addition, SIL provides services to the public through exhibitions, publications, internship and seminar programs. For FY 1986, an increase of 3 workyears and \$297,000 is requested to accelerate the retrospective conversion of manual records to machine readable data (\$200,000); provide expanded support for the library research collection for the new Center for African, Near Eastern, and Asian Cultures (1 workyear and \$50,000); and support the increased service demands of the new Museum Support Center branch (2 workyears and \$47,000). (Funding for the full-year costs of two Quadrangle-related positions is anticipated in the FY 1987 budget request.) Necessary pay of

\$103,000 is required for existing staff and an amount of \$65,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$86,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Smithsonian Institution Libraries serves the Institution's museums and other activities and the public through support of Smithsonian research, curatorial, publication, and administrative activities; direct participation in the creation of the national bibliographic data base; and SIL programs of publication, exhibition, loan and information services. Its collections of approximately 927,000 volumes, including over 20,000 serial subscriptions, are available to Smithsonian and other scholars through a system of 36 library locations in the Washington metropolitan area, at the Smithsonian Astrophysical Observatory (Massachusetts and Arizona), the Cooper-Hewitt Museum (New York City), and the Smithsonian Tropical Research Institute (Panama). SIL also is the designated purchasing agent for all books, journals, and related materials requested by other Smithsonian bureaus and coordinates all requests for automated information data base sources.

The application of sophisticated electronic technologies has become an important fundamental aspect in SIL planning for growth in the area of information transfer and resource sharing. In FY 1984, following several years of intensive planning, SIL began implementation of a sophisticated, automated system that will accommodate all library services, including acquisition, inventory, information retrieval, transmission of library data between branch libraries, and other information management services. For the past ten years, SIL has used the Online Computer Library Center, Inc. (OCLC), a national bibliographic data base, as a major data source for creation of SIL bibliographic records. Through OCLC, the Smithsonian also shares its bibliographic records with approximately 4,800 other libraries in North America and Europe which belong to OCLC.

SIL is comprised of three operational divisions: Research Services, which provides direct, individual assistance and reference services for the Smithsonian scholars and other users of the Libraries through the extensive book collections and specialized reference services available in the branch libraries and a central interdisciplinary reference service; Bibliographic Systems, responsible for acquisition, indexing and automated inventory control of SIL collections; and Collections Management, responsible for the selection, preservation, and housing of Smithsonian library collections, including the operation of a book conservation laboratory.

Research Services - SIL provides a full range of reference support for scholarly research in all fields of interest to the Institution's scholars, curators and administrators. In order to locate appropriate sources and provide the information needed by Smithsonian researchers, SIL staff make use of both manual reference tools and on-line bibliographic data bases. To serve research needs which cannot be met from its own holdings, SIL borrowed 18,385 volumes in FY 1984. SIL in turn loaned 4,679 items from its collections to users in other institutions; 38,000 SIL items were loaned within the Institution. In addition, SIL branch library staff answered 112,340 reference questions (approximately 843 questions every working day).

Bibliographic Systems - The Smithsonian Institution Bibliographic Information System (SIBIS) became operational in July 1984. This automated data base and software system will provide all the bibliographic and inventory processing for the Libraries, as well as support the other research, bibliographical, and archival needs of the Smithsonian. The introduction and subsequent development of SIBIS will result in significant expansion of the references services available to researchers using the SI Libraries. With the powerful search capability of the SIBIS software, library users and reference staff will be able to produce exhaustive annotated bibliographies for specialized research fields



no longer possible through the use of printed references. Moreover, SIL bibliographic records on SIBIS will be able to be accessed by researchers in libraries with computer communications capability throughout the United States, as well as through the OCLC data base. Researchers seeking specific items will be able to request them on-line through the SIBIS system, minimizing the delay in retrieving and delivering materials to users.

Collections Management - SIL maintains an ongoing collections management program, including selection, deaccessioning, conservation, space planning, and the determination of collections management policies for SIL. A collection development policy committee reviews current SIL practices in book and journal selection. SIL's preservation program works to minimize or prevent the deterioration of the materials in the collection. Preservation efforts include deacidification, microfilming, and other methods of book and paper conservation performed at SIL's book conservation laboratory.

Outreach - SIL continues to fulfill its commitment to national and international responsibilities in the areas of exhibitions, seminars and lectures, publications, and translations. For example, The Translation-and-Publications Program administered by SIL with Special Foreign Currency Program funds makes available a great number of scholarly articles and monographs. SIL has other publication activities which serve the Smithsonian staff, members of the scholarly community, and the general public. Recently issued are brochures describing each of the branch libraries, The Aerospace Periodical Index (G. K. Hall), and Information Sources and Services in Astronomy, Astrophysics, and Related Space Sciences. In the early part of FY 1985, The Dibner Manuscripts Catalogue will be completed; this illustrated publication describes 1,605 manuscripts important to the history of science, dating back to the 12th century. Also, in FY 1984 and early FY 1985, SIL presented lectures and seminars on the subjects of bibliography, library technology and preservation planning.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, an increase of 3 workyears and \$297,000 is requested to accelerate the retrospective conversion of manual records to machine readable data (\$200,000); provide essential support for the library research collection of the new Center for African, Near Eastern, and Asian Cultures (1 workyear and \$50,000); and support the increased service demands of the new Museum Support Center branch (2 workyears and \$47,000).

Retrospective Conversion (\$200,000) - The Smithsonian Institution Libraries plans to assure that researchers have full access to all collections by converting the manual bibliographic records created from the founding of the Institution through 1966 into machine readable data. Through grants, SIL has in the past four years converted records from 1966 to 1974 into machine readable data. Since 1974, all cataloguing at SIL has been done using the Online Computer Library Center computer system in accordance with national standards. These resulting 250,000 electronic records form the Smithsonian Institution Bibliographic Information System (SIBIS) data base, the core of SIL's automated library system. In FY 1986, SIL will begin to convert its older records, enter them into SIBIS, and report them to libraries nationwide. For this purpose, the addition of \$200,000 is requested. The proposed \$200,000 will be used in FY 1986 and in FY 1987 to convert to machine readable format: some 20,000 entries now remaining in SIL's manual "shelf list" (the master inventory of items according to their order on the shelf); and approximately 100,000 older items which were never recorded in the shelf list but which have some traces in the manual author-title-subject catalogue.

With the completion of this project in FY 1987, SIL will have in its on-line data base all materials now officially in the various branch libraries, approximately 370,000 records, covering some 540,000 volumes. New purchases will continue to be entered into the SIL data base on a current basis. Beginning in FY 1987, previously uncatalogued

materials (approximately 400,000 items) will need to be catalogued in machine readable format and entered into the data base. This project will require funding over a number of years.

Quadrangle-related Support (1 workyear and \$50,000) - The National Museum of African Art branch library has begun the necessary development to build the expanded research collection that the Center for African, Near Eastern, and Asian Cultures will require. As a relatively new library, however, the present African Art branch lacks most of the basic primary and secondary research sources that are necessary to support advanced scholarship. A three-year program to purchase and catalogue approximately 9,000 volumes to upgrade the collection began with funding of \$190,000 appropriated in FY 1985. Additional funding of \$25,000 is needed in FY 1986 to accelerate the cataloging of these new volumes. Also for FY 1986, an increase of .5 workyear and \$10,000 is requested to hire two library technicians, for one-quarter year each, to assist with the receipt and preparation of these volumes for processing. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) A further .5 workyear and \$15,000 are sought to provide full-year funding for the library technician position approved for FY 1985.

Museum Support Center Branch Library (2 workyears and \$47,000) - A major accomplishment in FY 1984 was the opening of the Museum Support Center (MSC) Branch Library at Silver Hill, Maryland. Resulting from the merger of the Conservation Analytical Laboratory Branch Library and the Oceanographic Sorting Center Branch Library, the MSC Branch Library will serve the Conservation Analytical Laboratory, the National Museum of Natural History, and the National Museum of American History facilities at the MSC. This branch is one of five conservation libraries in the world and the only one in this country which provides a conservation reference service.

The Conservation Analytical Laboratory has become an important center for museum conservation, research and information, and staff and bibliographic resources of the Smithsonian Institution Libraries are needed to support this growing function. At the MSC Branch Library, a dramatic increase in service to persons and organizations outside the Institution has developed over the past several years. In an average month, 24 advanced reference inquiries, some of which require a whole day's research, are conducted for outside users. Between 20 and 40 requests for interlibrary loans are received monthly. The library also will provide bibliographic support to the conservation students who will be interning in the Smithsonian Conservation Training Program. Additional staff support will be required to maintain a full range of library services for both research and educational purposes. Two additional library technicians and \$47,000 will allow the MSC branch to provide the required level of service as full operation of the MSC continues.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments and are used primarily to support nine full-time positions and related support costs including supplies, book binding and training (estimated expenditures of \$277,000 in FY 1985 and \$317,000 in FY 1986) and to purchase special collections items as they become available (estimated expenditures of \$25,000 in FY 1985). In FY 1984, an allotment was used to purchase the Echols Collection of books on Southeast Asia (expenditures of \$45,000 in FY 1984).

Restricted Funds - These are provided through gifts and grants from individuals, foundations, endowments, organizations or corporations for specific purposes. For example, gifts from the Dibner family are being used to establish stipends for research on the Dibner Collection of the History of Science and Technology.

OFFICE OF EXHIBITS CENTRAL

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds			
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	41	1,413	-	-	-	-40	-	-	-	-
FY 1985 Base	42	1,532	-	-	-	18	-	-	-	-
FY 1986 Estimate	43	1,707	-	-	-	2	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	42	1	43
11 Personnel Compensation.....	1,201	63	1,264
12 Personnel Benefits.....	151	7	158
21 Travel.....	3	0	3
25 Other Services.....	34	68	102
26 Supplies & Materials.....	98	36	134
31 Equipment.....	45	1	46
Total	<u>1,532</u>	<u>175</u>	<u>1,707</u>

Analysis of Increase

Necessary Pay.....	40
Inflation.....	7
Restoration of FY 1985 2% Reduction....	30
Program Funds.....	98

ABSTRACT - The Office of Exhibits Central (OEC) provides basic and specialized support for exhibitions and exhibit-related programs to Smithsonian museums, and to other bureaus with limited or no exhibit production capability. For FY 1986, an increase of 1 workyear and \$98,000 is requested to support the increased workload in exhibit production work that will result from the exhibition programs developed for the Quadrangle. Necessary pay of \$40,000 is required for existing staff and an amount of \$7,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$30,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - In order to supplement the capabilities of Smithsonian units, the Office of Exhibits Central provides professional services in designing, editing, fabricating, producing, installing and maintaining museum exhibitions. The services

provided by OEC depend on the need of the requesting unit, and range from the screening of a single label to the complete design and production of an exhibit.

OEC completes the design and fabrication of approximately 250 projects each year. Major complex projects may require up to two years to finish. For instance, a life-sized model of a pterodactyl-type flying animal with a 44-foot wing span required two years of research and the production of a series of scale models to insure scientific accuracy. Fabrication of the final exhibition model required an additional six months of effort by five staff model makers. A model of "Tatlin's Tower" for the Hirshhorn Museum and Sculpture Garden required three months of research and five months of construction by four model makers to complete the final exhibition piece. A substantial amount of time was consumed designing, testing, and producing a traveling exhibition on spacecraft models for the visually impaired.

OEC designs and produces approximately 20-25 traveling exhibitions each year for the Smithsonian Institution Traveling Exhibition Service (SITES). During FY 1983 and FY 1984, major new exhibitions prepared for SITES included "Building Brooklyn Bridge," "Ban Chiang: Discovery of a Lost Bronze Age," "Black Wings," "The Art of Cameroon," "The Precious Legacy: Judaic Treasures from the Czechoslovak State Collections," and "Yesterday's Tomorrows: Past Visions of the American Future."

Special exhibitions produced by the Office of Exhibits Central for installation in the Smithsonian Institution Building during FY 1983 and FY 1984 included: "Painting as a Pastime: The Paintings of Winston S. Churchill," "300 Years of German Immigration," and "Traditional Architecture of Saudi Arabia." OEC also provides editorial and graphic support for the Festival of American Folklife and the National Associate's Regional Activities Program.

The Office of Exhibits Central plays an important educational role in the production of exhibition and exhibit-related programs. Qualified interns sponsored by universities and museums in the United States and abroad are given individual training in exhibition preparation. OEC staff members serve as faculty in all Office of Museum Programs workshops on exhibitions and exhibit-related specialities. OEC also has provided professional advice on exhibition and exhibit-related matters to Federal agencies and cultural institutions, including the White House, the Office of the Architect of the Capitol, the Supreme Court, the Federal Bureau of Investigation, the United States Information Agency, and the National Capital Children's Museum.

OEC facilities, located at 1111 North Capitol Street, include design and editorial offices, a cabinet shop, a spray paint shop, a sheet plastic shop, a graphic production shop, a highly sophisticated model shop, and a freeze-dry lab. During FY 1983, a high-security storage facility was established, providing a staging area where museum objects could be held in a humidity and temperature controlled vault during the production phases of the exhibition in which they will be displayed.

EXPLANATION OF PROGRAM INCREASE - Quadrangle-related Support (1 workyear and \$98,000) - Base funding for the Office of Exhibits Central (OEC) provides resources to maintain Institution-wide support for exhibit-related services. Although funding for OEC has remained constant over the past five years, there has been an increased number of requests for OEC services. Since the beginning of FY 1985, there has been a 75% increase in the number of requests for editorial and labelling services over the same period in FY 1984. The increased number of requests and the greater complexity of the projects undertaken have resulted in necessary reductions in the scope and size of many of the requested projects; delays in meeting scheduled completion dates; and the referral of some requests to other design and production sources. Among the requests referred to other facilities were the SITES exhibit on wine labels; the Cameroon show; an SI Press exhibit; and the Renwick Gallery's Material Evidence exhibit. In FY1986 and following

years, the demand for OEC services will increase further as a result of the exhibit-related programs developed by the International Center and the other program elements of the new Center for African, Near Eastern and Asian Cultures.

It is anticipated that OEC support for the Quadrangle in FY 1986 will include planning for different aspects of the design, preparation, and installation work necessary to complete the exhibition areas of the Center for African, Near Eastern, and Asian Cultures. This will entail preparing design drawings and schematics, and building scale and/or full scale models of the exhibition area for planning and review prior to the actual production of the exhibitions. To accomplish this task, an additional amount of \$98,000 is sought for FY 1986. Of this amount, \$30,000 is required to hire an exhibits specialist and \$68,000 is needed for contractual services. Future work to be done by OEC in the Quadrangle will include building cases; mounting artifacts; developing and editing descriptive labels; and silk-screening. In addition, OEC will offer specialized exhibition services to supplement the exhibit capabilities of the National Museum of African Art and the Sackler Gallery as they develop the initial installation of permanent exhibitions. Additional resources will be sought in future years to accomplish this work.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by tuition fees received from local universities; proceeds from the sale of motion picture film prints sold at cost to museums, libraries and related educational organizations; sales of the OEC book A Freeze-Dry Manual through the Smithsonian Institution Press; and reimbursements from internal Smithsonian units. These funds are used to purchase supplies, materials and services in support of OEC activities, to defray costs associated with special events and, as needed, to supplement a portion of travel expenses associated with consultation with other museum professionals.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	7	327	25	1,633	-	80	3	1,486	-	42
FY 1985 Base	7	311	23	1,445	-	-	2	833	-	-
FY 1986 Estimate	10	446	25	1,650	-	-	-	655	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	7	3	10
11 Personnel Compensation.....	175	84	259
12 Personnel Benefits.....	26	11	37
21 Travel.....	9	3	12
22 Transportation of Things.....	62	10	72
23 Rent, Communications & Utilities....	17	-	17
25 Other Services.....	22	11	33
26 Supplies & Materials.....	-	16	16
Total	311	135	446

Analysis of Increase

Necessary Pay.....	10
Inflation.....	4
Restoration of FY 1985 2% Reduction....	6
Program Funds.....	115

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) provides an important national service by offering carefully-selected, well-designed and widely-circulated traveling exhibitions covering a broad range of subject matter in the fields of art, design, technology, history, science, anthropology, education, and the environment. These include exhibitions from the Smithsonian's collections as well as those organized and loaned by other museums in the United States and abroad, foreign governments, private individuals, and organizations throughout the world. During FY 1986, facilities for SITES will be relocated from the Arts and Industries Building to space in the Quadrangle. For FY 1986, an increase of 3 workyears and \$115,000 is requested for part-year funding of six new positions required as a result of SITES' enhanced program responsibilities and expanded operations in the Quadrangle. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) Necessary pay of \$10,000 is required for existing staff and an amount of \$4,000 is sought to compensate

for the effects of inflation in nonsalary areas of expense. A further amount of \$6,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Smithsonian Institution Traveling Exhibition Service is the primary Smithsonian organization which originates, organizes and circulates traveling exhibitions. SITES, the largest service of its kind in the United States, provides a broad selection of exhibits encompassing the diverse disciplines and subject matter represented in the collections of the Smithsonian, including art, natural history, design, archeology, anthropology, science and technology, decorative arts and crafts, and popular culture. SITES' exhibitions are complete programs accompanied by curatorial and registrarial information, handling instructions, technical information, publicity materials, suggested educational activities, and, in most instances, exhibit catalogues. SITES also provides professional assistance to the museum field on a variety of topics including shipping and insurance of artifacts, installation techniques, exhibit security, design and upgrading of exhibition space, and contract matters.

With over 120 exhibitions in continuous circulation, SITES represents an important outreach and service program of the Smithsonian. SITES' shows are seen by millions of people each year through local museums, galleries, and educational and cultural institutions in the United States and abroad. Since its establishment in 1952, SITES exhibitions have reached an audience of over 100 million people in 15,000 communities. Over 7,000 institutions receive Update, SITES' annual catalogue describing the traveling exhibitions available; SITELINE, a quarterly newsletter; and special mailings providing information on specific exhibitions.

SITES' exhibitions represent an essential element in the program and resource planning of thousands of exhibition-sponsoring organizations. These organizations benefit directly from the traveling exhibitions by being able to present an exhibit for a fraction of the cost required to develop and produce the exhibition for themselves. The Federal support received by SITES allows exhibitions to be developed, toured and provided to these organizations at an affordable participation fee. Federal funding constitutes only 12 percent of SITES total operating budget; the remainder is provided through exhibition fees, nonappropriated Trust fund support from the Institution, and outside grants and contracts. This Federal assistance, however, is essential to insure that fees paid for exhibitions remain within the budgetary reach of participating museums and galleries across the United States.

During FY 1984, the following bookings for SITES' shows were scheduled:

Alabama	14	Mississippi	5
Alaska	2	Missouri	12
Arizona	2	Montana	2
Arkansas	3	Nebraska	2
California	25	Nevada	2
Colorado	6	New Jersey	2
Connecticut	7	New Mexico	5
Delaware	3	New York	15
District of Columbia	7	North Carolina	10
Florida	28	North Dakota	1
Georgia	11	Ohio	30
Hawaii	1	Oklahoma	4
Idaho	3	Oregon	5
Illinois	17	Pennsylvania	13
Indiana	6	South Carolina	3
Iowa	8	South Dakota	2
Kansas	13	Tennessee	16
Kentucky	5	Texas	31
Louisiana	14	Utah	3
Maine	3	Virginia	4
Maryland	9	Vermont	1
Massachusetts	15	Washington (State)	7
Michigan	11	Wisconsin	14
Minnesota	8	West Virginia	9

A total of 244 cities in 47 states and the District of Columbia were served for a total of 419 showings.

SITES' traveling exhibitions also provide the opportunity for people in other countries to learn about American history and culture. During FY 1984, "Threads: Seven American Artists and Their Miniature Pictures" traveled in North Africa and the Middle East; "American Porcelain" in Asia; and "Good as Gold: Alternative Materials in American Jewelry" in Latin America. A total of 28 exhibition bookings were scheduled for travel outside the United States in FY 1984. SITES also coordinated the development of the exhibition "Treasures from the Smithsonian Institution," presented in conjunction with the annual Edinburgh International Festival in Scotland during August 1984.

SITES currently estimates that 49 new traveling exhibitions will begin tour during FY 1985 and FY 1986. Three new shows will concentrate on black history and culture in America: "Black Women: Achievements Against the Odds," "Five Black Artists in 19th Century America from the National Museum of American Art," and "Portraits in Black: Outstanding Americans of Negro Origin from the Harmon Collection of the National Portrait Gallery." Other major new exhibitions include: "America's Space Truck: The Space Shuttle," adapted from an exhibition at the National Air and Space Museum, featuring four scale models of the Shuttle, Spacelab, and the Space Telescope; "After the Revolution: Everyday life in America, 1780-1800," adapted from the permanent exhibition opening at the National Museum of American History in 1985, presenting a new view of life in late 18th-century America; "From Ebla to Damascus," tracing the cultural development of Syria within the framework of Near Eastern history, and presenting the archeological treasures of Syria to the American public for the first time; and "Hollywood: Legend and Reality," celebrating the creative achievement and cultural influence of American movies over the past 70 years. In addition, SITES already has initiated development of 14 of the upcoming exhibitions scheduled to tour in FY 1987 and following years. SITES exhibitions, which require at least one year to 18 months to develop and produce, usually average two years on tour.



SITES Exhibitions Beginning Tours, FY 1985 - FY 1986

Based on Smithsonian Sources

FY 1985: "America's Space Truck: The Space Shuttle"; "Artists and Models: Portraits from the Hirshhorn Museum and Sculpture Garden"; "Athletes and Heroes: Portraits from the TIME Collection at the National Portrait Gallery"; "Baseball Immortals"; "Black Women: Achievements Against the Odds"; "Exploring Microspace"; "Genre Scenes: Works on Paper from the Hirshhorn Museum and Sculpture Garden"; "The Laser at 25"; "Mathew Brady Photographs from the National Portrait Gallery's Meserve Collection"; "New Vistas: American Art Pottery from the Cooper-Hewitt Museum"; "Perfect in Her Place: Women at Work in Industrial America"; "Portraits in Black: Outstanding Americans of Negro Origin from the Harmon Collection of the National Portrait Gallery"; and "Sharing Traditions: Five Black Artists in 19th Century America from the National Museum of American Art."

FY 1986: "After the Revolution: Everyday Life in America, 1780-1800"; "Artificial Reefs"; "Drawn from the Sea"; "Etchings from the Tiepolis"; "The Promised Land: Five Utopias Compared"; and "Surrealist Art from the Hirshhorn."

Based on Other Sources

FY 1985: "Audubon: Science into Art"; "The Dog Observed: Photographs, 1844-1984"; "Five Centuries of Italian Textiles"; "From Ebla to Damascus"; "Homage to Amanda: Two Hundred Years of American Quilts"; "Mouton Rothschild: Paintings for the Labels"; "Music and Dance in Highland New Guinea"; "Newcomb Pottery: An Enterprise for Southern Women, 1895-1940"; "Peonies of Greece: Myth, Science, and Art"; "Power and Gold: Jewelry from Indonesia, Malaysia and the Philippines"; "Recent American Works on Paper"; "Ten Years of European Illustration"; and "Three Centuries of German Painting and Drawing."

FY 1986: "American Master Drawings from the Corcoran Gallery of Art"; "Anasazi World"; "Ancestors: The Story of Human Evolution"; "The Art of Cameroon" (Panel exhibition version); "Bamana Masks and Figures"; "Community Industries of the Shakers"; "Felix Vallatton: A New Examination"; "Frank Lloyd Wright and the Johnson Wax Buildings"; "Hollywood: Legend and Reality"; "Marconi"; "Mark Twain and Huck Finn: Joy-Flags and Milestones"; "The Master Weavers"; "Material Evidence: New Color Techniques in Handmade Furniture"; "The Paris Style 1900: Art Nouveau Bing"; "Pasternak"; "Renaissance Master Bronzes from the Kunsthistorisches Museum, Vienna"; and "Treasures from the Land: New Zealand Craftsmen and Their Native Materials."

EXPLANATION OF PROGRAM INCREASE - For FY 1986, an increase of 3 workyears and \$115,000 is requested for part-year funding of six new positions required as a result of SITES' enhanced program responsibilities and expanded operations in the Quadrangle. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.)

Quadrangle-related Programs (3 workyears and \$115,000) - SITES, through its exhibitions, workshops, publications and educational materials, reaches audiences throughout the United States and many foreign countries. The move to the Quadrangle in FY 1986 will permit the development of exhibitions and programs that assist in fulfilling the intended mission of the International Center and reinforce SITES' role in international exchange. Enlarged facilities in the Quadrangle are essential to these goals. Facilities will include an introductory gallery; an educational workshop; an exhibition publications center; a vault for temporary storage of exhibition objects and materials; and additional meeting rooms. Resources sought for FY 1986 are for the following purposes:

1. Introductory Gallery: SITES currently occupies facilities which do not meet its needs. The Introductory Gallery (approximately 1,000 square feet) will provide SITES with space where visiting colleagues, potential corporate sponsors, exhibitors and lenders can view the work of SITES, which presently may appear conceptual and intangible due to the lack of exhibition space on The Mall. Materials to be included in the gallery are installation photographs from various exhibitors, samples of SITES' educational materials, public service announcements, and illustrations of educational and interpretive techniques museums can use to improve the educational aspects of their programs. To coordinate graphic and visual presentations and to design gallery displays, a graphics technician is required (.5 workyear and \$12,000). The technician also will be used to strengthen SITES' publications program which produces over 30 publications annually. A sum of \$11,000 also is requested to purchase supplies and materials used in producing Introductory Gallery presentations.

2. Educational Workshop: SITES develops and designs the themes and formats of exhibitions by actively involving curators and scholars from a broad spectrum of disciplines. As a result, SITES has developed one of the most comprehensive and finest quality museum education programs in the world. This includes education programs which accompany exhibitions, and educational and experiential exhibitions. One such exhibition is "What If I Couldn't," designed so that general audiences can learn about the special needs of the handicapped.

The new educational workshop area will allow SITES to integrate scholarly research and education in the initial stages of exhibition development. The educational workshop facility will be used to test and evaluate educational materials designed to accompany SITES' exhibitions; determine the curatorial goals of specific exhibition projects; hold seminars on exhibition design and content, audience identification and development, and public relations techniques; and sponsor outreach programs directed at local schools and museum professionals. Workshops for students are planned as part of the testing and evaluation activities. For the successful operation of the workshops, an educational workshop coordinator (.5 workyear and \$16,000) is requested. The coordinator will be in charge of scheduling, coordinating, promoting, and developing educational programming, research, and evaluation studies in conjunction with the workshop activities. A sum of \$11,000 also is sought to develop educational programming and design brochures and supplementary material to inform workshop participants, exhibitors and other institutions about these programs.

3. Exhibition Publications Center: Since its inception in 1952, SITES has published hundreds of catalogues, scholarly documents, and enrichment materials to accompany traveling exhibitions. SITES' literary offerings continue to grow rapidly, with over 30 new publications issued each year. In addition, SITES accumulates slides and photographs, which promote its exhibitions and educational product offerings, and receives and exchanges exhibition-related publications with museums throughout the United States and abroad. SITES has amassed a vast and valuable collection of exhibition literature, but cannot offer these resources to colleagues or the public as a usable reference due to the current lack of space.

To make its publications readily accessible and to use these publications as an outreach tool, SITES intends to establish an Exhibition Publications Center in the Quadrangle premises. This facility will serve as a repository for all SITES' publications and those of other traveling exhibition services and museums. To meet the needs of scholarly research and requests for publications, proper organization and maintenance of an efficiently catalogued center is essential. SITES will require a research assistant (.5 workyear and \$12,000) who will organize the large volume of SITES' literature and slides; develop and implement a cataloguing system for its

publications and externally authored works; act as liaison with public users of the center; and fill outside requests for this material. This assistant also will develop a system to track the publications activities of other exhibitors. This data will provide pertinent marketing information on the program offerings of professional colleagues, thus allowing SITES to avoid programmatic duplication.

4. Temporary Storage: With over 100 exhibitions in its program and from 40 to 400 objects and artifacts in each, SITES needs its own high security temporary storage facility adjacent to its registrarial operations. The Quadrangle will provide such a facility with the construction of a vault.

To fulfill present and new responsibilities in relation to the Quadrangle facilities, SITES needs an assistant registrar (.5 workyear and \$12,000) for monitoring the movement and storage of objects while in the vault. Additional funding of \$3,000 also is requested for SITES' expanded requirements for courier travel to accompany valuable artifacts and for registrarial travel to exhibition locations to report on the condition of objects on tour.

5. Inaugural Exhibition for the International Gallery: SITES plans to organize the inaugural exhibition of the International Gallery for an opening in spring of 1987. The exhibition titled "Birth - A Ritual for Life" will focus on the "birthing" symbols and mythology of many cultures around the world. The exhibition will involve the disciplines of art, anthropology, and history and the expertise of both Smithsonian and other museum scholars. To help establish this exhibition, which will require a coordinated effort between SITES and the Directorate of International Activities, two additional positions are sought for one-half year each in FY 1986 (1 workyear and \$38,000). These consist of an exhibition coordinator and an assistant registrar who will initiate and coordinate the curatorial participation, research, object selection and negotiations with lenders, and work with existing SITES staff toward the realization of a major publication and supporting educational materials.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are derived from participation fees collected from museums, universities, historical societies and other users of the traveling exhibitions. These funds, supplemented by an allotment, support 25 positions and virtually all exhibit development costs including publications, materials, outside specialists and contractual services (estimated expenditures of \$1,445,000 in FY 1985 and \$1,650,000 in FY 1986).

Restricted Funds - Funds are provided in the form of gifts and foundation grants from individuals, organizations or corporations for specific purposes. During FY 1984, several grants were received: from Champion International Corporation for the "Yesterday's Tomorrows: Past Visions of the American Future" exhibit; from Time, Inc. for the exhibit, "Hollywood: Legend and Reality"; from Aramco, Shell Companies Foundation, Mobil Oil Corporation, and an anonymous sponsor, for "From Ebla to Damascus"; from Mouton Rothschild for the show "Mouton Rothschild: Paintings for the Labels"; and from CBS, Inc. to develop ideas and concepts for educational software.

Major funding is expected to continue during FY 1985 for the development of important exhibitions: "Paris Style 1900: Art Nouveau Bing"; "Felix Vallotton"; "Five Centuries of Italian Textiles"; "Lost Cities, Forbidden Kings"; and "The Promised Land: Five Utopias." SITES is seeking funds from corporations through the Institution's Office of Membership and Development to produce the following exhibits: "Renaissance Master Bronzes" and "Baseball Immortals."

SMITHSONIAN ARCHIVES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1984 Actual	14	492	5	110	-	1	-	-	-	-
FY 1985 Base	15	526	5	144	-	-	-	-	-	-
FY 1986 Estimate	15	556	5	129	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	15	0	15
11 Personnel Compensation.....	391	15	406
12 Personnel Benefits.....	46	2	48
21 Travel.....	4	-	4
22 Transportation of Things.....	1	-	1
24 Printing & Reproduction.....	3	-	3
25 Other Services.....	50	6	56
26 Supplies & Materials.....	18	4	22
31 Equipment.....	13	3	16
Total	<u>526</u>	<u>30</u>	<u>556</u>

Analysis of Increase

Necessary Pay.....	17
Inflation.....	3
Restoration of FY 1985 2% Reduction....	10

ABSTRACT - The Smithsonian Institution Archives is the official repository for papers of historic value relating to the Smithsonian and to the fields of science, art, history and the humanities. Its holdings, forming a valuable resource for scholars working on the history of science and on other areas of traditional Smithsonian interest, are available to all qualified researchers. Moreover, the Archives provides archival and records management services to support the research, collections management, educational and administrative functions of the Institution. No program increase is requested for FY 1986. Necessary pay of \$17,000 is required for existing staff and an amount of \$3,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$10,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Smithsonian Archives serves as the Institutional repository for official records, specimen-related records and the papers of distinguished research

staff. It is responsible for a central research facility, an off-Mall records storage center at 1111 North Capitol Street, and for maintaining an automated information system for archival collections. The Archives protects the integrity of the vital records of the Institution; preserves significant historical documentary and other material that is subject to decay or damage; assists scholars and the general public in gaining access to these research collections; and supplements vital records of the Institution by acquiring relevant personal papers and oral history interviews. The collections maintained by the Archives contain records in all media: paper, sound, film, artwork, occasional artifacts, and machine-readable records associated with or derived from the official work and program activities of the Institution.

Research - The Archives responded to 1,347 reference inquiries in FY 1984, 761 from within the Institution and 586 from outside scholars and the general public. This activity is up nearly 20 percent over the FY 1983 total of 1,126 inquiries, which was itself up 44 percent over FY 1982. Research by scholars produced 26 publications based at least in part on work in the Archives during FY 1984. Among these publications were Museum Masters: Their Museums and Their Influence, by Edward P. Alexander; The Capital Image: Painters in Washington, by Andrew J. Cosentino and Henry H. Glassie; "Mammals of the Dismal Swamp: An Historical Account," by Charles O. Handley, Jr., in The Great Dismal Swamp; and A Desert Country Near The Sea: A Natural History of the Cape Region Baja, California, by Ann H. Zwinger. Other research included the role of science in North American arctic exploration, a history of the early museum movement in the United States, and a study of the origins of the Federal Forestry Program.

In FY 1984, a new manual on museum archives was published and distributed by the Society of American Archivists, and staff members have published several articles in professional journals on subjects related to museum archives, oral history, and the history of science.

During FY 1983 and FY 1984, the Archives participated in the development of applications of the Smithsonian Institution Bibliographic Information System (SIBIS) to the Archives' holdings. Scheduled for full operation in FY 1985, SIBIS will make the Archives' information available to all Institutional users and to researchers in other parts of the country through interlibrary networks.

In response to a long-perceived need, the Archives began a comprehensive survey of photographic collections in the Institution. Information on the location, volume, condition, and other characteristics of photographic collections in more than 200 offices of the Institution are being entered into the SIBIS data base. The Archives is investigating the possibility of using the SIBIS formats and the combination of computer applications and the development of video disc technologies to obtain item-level control over the individual photographic images of these collections.

The Archives has initiated a survey to locate and describe collections of scientific drawings and illustrations in the National Museum of Natural History/Museum of Man. The survey work will include the preparation of a guide to these collections; the preservation of those drawings and illustrations with scientific, artistic, or historical value; the development of management and appraisal guidelines for the retention and disposition of these collections; and the identification of items for microform copying.

An oral history program has been developed by the Archives to supplement existing archival documentation. Beginning in 1974, taped interviews with key administrative and scholarly staff have been conducted, including interviews with the late Secretaries Charles G. Abbot and Alexander Wetmore and with Secretary Emeritus S. Dillon Ripley. These interviews have added an invaluable dimension to the historical study of the Smithsonian in the 20th century.

Conservation of Archival Collections - During the next five years, the Archives plans to establish a conservation program which will include deacidification and encapsulation processes, and to upgrade its microform copying capability to compensate for records deterioration. A survey of material in the Archives conducted in FY 1984 revealed that over one million pages of 19th- and 20th-century records from the Office of the Secretary were decaying. Among those records are 19th-century letterpress books; approximately 175,000 pages of specimen catalogues of the U.S. National Museum; and 175,000 pages of drawings and manuscripts, including the papers of John James Audubon and other prominent 19th-century naturalists and scientists. Immediate microfilming of these works is required.

A project to convert the Archives' 24,750 nitrate negative images to a more stable film base is expected to be completed by the end of FY 1989. The Archives also coordinates and manages the cold storage of approximately 28,000 still nitrate images and 12 reels of motion picture film belonging to other Smithsonian bureaus. In FY 1984, the 6,700 images microfilmed included 7,183 pages of Cooper-Hewitt Museum accession records filmed as security copies. Other necessary conservation projects identified by the survey included audio recordings, microfilm, and other motion picture film and still photographs requiring care and copying to preserve their images and information content.

Records Management - The Archives' five-year plan to establish records management and archival programs in administrative and program offices, which began in FY 1981, is anticipated to be completed in FY 1986. Although concern for vital records is found in the correspondence of 19th-century Secretaries of the Institution, this five-year plan is the first systematic attempt to extend comprehensive, standardized records management and archival concepts and practices throughout the Institution. A handbook to provide guidance for records disposition throughout the Institution is in draft form and being readied for distribution. Records surveys and specific disposition schedules already have been established in about one-third of the approximately 600 offices identified as potential records-producing entities. Routine and systematic records retention and disposal processes for the entire Institution are anticipated to be in effect by the start of FY 1987.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by allotments and are used to cover salaries of an archivist and an archives technician, and various support and publishing costs (estimated expenditures of \$60,000 in FY 1985 and \$65,000 in FY 1986). Funds also are provided for three positions and publication costs of the Finder's Guide to Photographic Collections in the Smithsonian Institution (estimated expenditures of \$84,000 in FY 1985 and \$64,000 in FY 1986).

NATIONAL MUSEUM ACT

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	3	785	-	-	-	-	-	-	-	-
FY 1985 Base	3	775	-	-	-	-	-	-	-	-
FY 1986 Estimate	3	793	-	-	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	3	0	3
11 Personnel Compensation.....	72	2	74
12 Personnel Benefits.....	9	-	9
21 Travel.....	9	-	9
24 Printing & Reproduction.....	7	-	7
25 Other Services.....	19	-	19
26 Supplies & Materials.....	1	-	1
41 Grants.....	658	16	674
<b>Total</b>	<b>775</b>	<b>18</b>	<b>793</b>

Analysis of Increase

Necessary Pay.....	2
Restoration of FY 1985 2% Reduction....	16

ABSTRACT - The National Museum Act of 1966 (20 U.S.C. 65a), as amended, established a technical assistance program, administered by the Smithsonian, to issue grants for projects enhancing the quality of museum operations throughout the Nation. The National Museum Act (NMA) grants allow the Smithsonian to support professional training in museum activities -- including collections management, research and exhibitions, education, public relations, and conservation -- and scientific research on important museum-related problems. Historically the grant program has attempted to foster a high standard of professionalism in the museum community and to increase awareness of the critical importance of conservation vis-a-vis the care and preservation of our cultural and national heritage. No program increase is requested for FY 1986. Necessary pay of \$2,000 is required for existing staff. A further amount of \$16,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - National Museum Act grants provide training opportunities for museum professionals; support research that advances knowledge about critical museum-related problems; and encourage activities that make technical information available to the field. Grants are made to museums, professional museum organizations and associations, and academic institutions with museum-related programs throughout the United States.

The Advisory Council, which assists in identifying priorities and evaluating projects for which support is requested, is appointed by the Secretary. It consists of museum and conservation professionals in the principal museum disciplines of art, science and history. In evaluating the applications for assistance from NMA, the Advisory Council makes recommendations that are based on the potential benefit of the project to the museum field, the quality of the proposal, and the qualifications of the individuals involved.

From 1972 to 1984, the National Museum Act processed 2,160 applications for grants and made 728 awards, totaling \$9.4 million, of which 355 awards (49 percent) involved conservation training and research. In FY 1984, 228 proposals requesting \$4.5 million were submitted--the largest number of applications and the largest dollar request received by the NMA program in any one year. Sixty-two grants were made totaling \$689,000. Of these, 45 grants (72 percent) related to conservation.

Professional Training - Addressing the critical need for trained conservators in the United States, the National Museum Act established a program in FY 1976 to assist individuals preparing themselves for a professional career in conservation. In FY 1983 and FY 1984, 44 awards were made to institutions to sponsor individuals studying various areas of conservation, including textiles, archival materials, ethnographic and archeological objects, paintings and paper. Training programs have included graduate-level studies in conservation, internships and apprenticeships, and mid-career refresher courses. The great majority of trainees now are practicing conservation in major museums or regional conservation centers. Internship grants also have provided museum training opportunities for individuals from minority backgrounds. This includes two Hispanic students at the Denver Art Museum and two black students at the Afro-American Historical and Cultural Museum in Philadelphia.

Seminars and workshops provide up-to-date technical information to professionals in the museum field. During FY 1983 and FY 1984, NMA awarded 18 grants to sponsor seminars on conservation, museum administration, and museum education. This included two projects in FY 1984 to increase the professional skills of minorities working with special collections. A series of regional workshops on museum management was held for staff members of institutions that collect and exhibit African-American cultural materials. Another workshop was given on the use of oral history and photographic collections in American Indian museums and cultural centers.

Research - The National Museum Act has sponsored research projects to increase knowledge about museum-related problems. For example, in FY 1983 and FY 1984, a project at the Metropolitan Museum of Art in New York City examined the underdrawings of old European panel paintings with infrared reflectography in order to determine authenticity and to analyze artists' techniques. This visual data will be refined and enhanced by computer analysis. The results of this project will be the subject of a symposium on the use of infrared reflectography in art history.

In FY 1983 and FY 1984, 14 grants were made for scientific research on conservation problems. These research projects included such topics as pest control in museums, corrosion problems that affect the silver objects in decorative arts collections, and proper enclosures for 19th-century photographic prints. One project has resulted in conservation research being aided by medical techniques used to identify protein materials. This process will help conservators identify and, ultimately, treat damaged objects.



Services to the Field - Grants in this category have included support to national and regional professional associations, permitting them to provide such services as informational journals, workshops and assistance from consultants to their member museums at the local and regional levels. A grant made in 1984 is enabling the Center for Occupational Hazards to prepare carefully researched data sheets on health hazards in museum conservation, which is an area of increasing concern to conservators.

The staffs of the National Museum Act and the Office of the Assistant Secretary for Museum Programs work closely with individuals, museums, educational institutions, and professional organizations involved in museum training and research activities to better coordinate efforts to meet the increasingly complex needs of museums. The Smithsonian also consults regularly with administrators of Federal museum programs and participates in the Museum Working Group of the Interagency Committee on the Arts and Humanities. Specifically, the Smithsonian works in close cooperation with the National Endowment for the Arts, the National Endowment for the Humanities, the Institute of Museum Services, and the National Science Foundation to insure the effective and efficient utilization of Federal resources in the museum field.

Status of Authorization - Previously available authority expired September 30, 1982. Funding for National Museum Act activities has been provided in the Interior and Related Agencies appropriation bills for FY 1983, FY 1984 and FY 1985.

DIRECTORATE OF INTERNATIONAL ACTIVITIES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
FY 1984 Actual	7	252	-	-	-	-	-	-	-	-
FY 1985 Base	9	323	9	523	-	-	-	100	-	-
FY 1986 Estimate	10	605	10	601	-	-	-	200	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	9	1	10
11 Personnel Compensation.....	253	32	285
12 Personnel Benefits.....	32	3	35
21 Travel.....	1	20	21
22 Transportation of Things.....	8	1	9
23 Rent, Communications & Utilities....	1	1	2
24 Printing & Reproduction.....	10	7	17
25 Other Services.....	14	182	196
26 Supplies & Materials.....	4	25	29
31 Equipment.....	-	11	11
Total	<u>323</u>	<u>282</u>	<u>605</u>

Analysis of Increase

Necessary Pay.....	5
Inflation.....	4
Restoration of FY 1985 2% Reduction....	6
Program Funds.....	267

ABSTRACT - The Secretary has established a Directorate of International Activities to monitor, coordinate, and enhance the Smithsonian-wide array of international activities. This organization will be responsible for liaison with Federal agencies and national and international organizations whose activities relate to those of the Institution; will assist the Secretary in establishing balanced international program emphases, reflecting all world regions and all fields of existing Smithsonian interest from popular culture and the performing arts to basic research in the natural sciences; and will assist him in developing a comprehensive, long-range program plan that will increase the scope, salience, and effectiveness of all the Institution's international activities.

The Directorate also oversees the International Center, the Office of Service and Protocol, and the Office of Publications Exchange (formerly the Office of International Activities and International Exchange Service). The continuing goal of the Directorate and the Center will be the fostering of intercultural understanding and communication through scholarship, exhibitions, conferences/seminars, films, and other appropriate instruments of communication.

Staff and operating support for the Office of Service and Protocol (5 workyears and \$202,000) and for the Office of Publications Exchange (4 workyears and \$121,000) were appropriated in FY 1985, and no increases are proposed for these Offices in FY 1986. The other Directorate functions established in FY 1985 are supported by the transfer to the Directorate of nonappropriated funds (\$523,000), and by the Congressionally-approved reassignment of two positions from another Smithsonian office. Funding and workyears for these two positions (2 workyears and \$66,000) have been permanently reprogrammed from the Office of Publications Exchange.

In FY 1986, an increase of \$267,000 and 1 workyear is sought to support the design and development costs associated with the inaugural exhibition in the International Center (\$180,000); to plan a symposium associated with the exhibition, and workshops on other subjects (\$40,000); and to provide initial staffing (1 workyear and \$47,000) for two positions for the International Center. Necessary pay of \$5,000 is required for existing staff and an amount of \$4,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$6,000 is requested to restore funds eliminated from the Offices of Service and Protocol, and Publications Exchange as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - Through its International Center, the Smithsonian proposes to facilitate its own international research, the greater part of it in fields of the natural sciences, to encourage collaborative work involving individuals and institutions in other countries, and to advance the objectives of its charter by serving as an example of international cooperation. The international programs of the Smithsonian date back to its earliest days and are integral to the nature of the Institution itself. The most recent inventory of current Smithsonian international programs reveals more than 700 projects carried out in 116 countries.

The Smithsonian also has contributed significantly to the establishment of new international organizations and remains active in their support today. To cite only a few examples, in 1963 the Smithsonian, in cooperation with the Royal Society and the Belgian Academy of Scientists, founded the Charles Darwin Research Station in Ecuador which continues to assist in conserving the environment of the Galapagos Islands. The Smithsonian was instrumental in founding the Council of American Overseas Research Centers in 1981, enabling its own scholars and those of other institutions to gain better access to overseas projects through ten research centers abroad. In 1980 the Smithsonian and the Royal Society gained a charter for the Seychelles Island Foundation to preserve Aldabra Island and other reserves of that republic. In 1983 the Smithsonian assisted in founding the King Mahendra Trust to preserve the national parks of Nepal. In 1968 the Smithsonian assumed responsibility for the Central Bureau of Astronomical Telegrams to alert scientists for observations of newly discovered phenomena in space. In 1975 the Smithsonian began the operation of the Scientific Events Alert Network to disseminate information among scientists in 130 countries at the time of natural disasters. The Smithsonian-affiliated Woodrow Wilson International Center for Scholars, continually having in residence a distinguished cadre of foreign scholars from all regions of the world, provides a unique center for advanced studies in social, political, and humanistic fields. In the International Center, a directorate of biological diversity has just been established to encourage greater collective expert attention to the urgent problems arising from the extinction of species.

It is this wide range of current and future Smithsonian international activities which will provide the subject matter for programs in the International Center, ranging from the cultural and artistic to the scientific and technical.

The twofold objective of the International Center is to provide for all levels of the public carefully researched insights into the ancient, complex, and diverse cultures represented by the museums in the Quadrangle; and to bring to the same public's attention some of the results of extensive Smithsonian scientific research, which will represent the Institution's first systematic efforts in this important area. From the beginning, in 1987, the Center expects to install two or three rotating exhibitions each year, sponsor half-dozen research conferences, conduct two or three major symposia on themes related to various aspects of the Smithsonian research, and stage associated film showings, public lectures, and performances.

During the last half of FY 1985 and throughout FY 1986, the Directorate primarily will be concerned with inaugural programs and their immediate successors, envisioning the public opening of the Center in the spring of 1987. In descending order of costs, these programs will conform to the Center's standard format: exhibitions, conferences, seminars/symposia, performances, films showings, and lecture-discussion meetings. There may be combinations of events which will increase costs, but in any case exhibition planning and production will be the dominant cost element of all Center offerings.

In consonance with the building of the Quadrangle and with its operations, the Institution proposes for the International Center a Federal-Trust sharing of funding responsibilities. Thus, production costs for exhibitions and other programs will be met through fund-raising efforts and the Institution's Special Exhibition Fund, while it is requested that a Federal base be established in FY 1986 to support development costs. In addition, the production/development, shared formula would be applied to other public programs in FY 1986 and succeeding years.

EXPLANATION OF PROGRAM INCREASE - In FY 1986, an increase of \$267,000 and 1 workyear is sought to support the design and development costs associated with the inaugural exhibition in the International Center (\$180,000); to plan a symposium associated with the exhibition, and workshops on other subjects (\$40,000); and to provide initial staffing (1 workyear and \$47,000) for two positions for the International Center.

The 1987 inaugural exhibition and supporting symposium will be "Birth - A Ritual for Life," an ambitious subject especially appropriate for the opening of an international gallery, and one not previously presented as a museum exhibition. Birth is a universal experience, the symbolic content of which has found its way into the mythology of every culture, and its symbols are manifested artistically throughout the world. This exhibition will focus on the ways certain cultures view this subject, how they incorporate it in their world view, how they deal with its reality as well as its symbolism, and how they express these ideas and concepts in material form. From the Venus figurines of Paleolithic times to African sculpture, there are art objects and artifacts which are visually exciting and which also serve as bases of comparison among cultures. The exhibition will provide focus for aesthetic appreciation stemming from the research of art historians and for cultural understanding as interpreted by anthropologists and other scientists.

For several reasons the exhibition is judged to be an ideal inaugural show: its theme of creation provides a reason to celebrate and parallels the birth of a gallery and the birth of a program; it incorporates a strong didactic component in the context of an aesthetic and scientific presentation; it allows the inclusion of many cultures and complements the presentations of the two Quadrangle museums; it results from new scholarship; it creates a bridge of understanding between the cultures exhibited and the experiences of the viewers; and it allows a cross-disciplinary approach combining art, history, and anthropology.

The overall cost of the exhibition will be \$600,000. A total of \$180,000 is requested in FY 1986 to meet planning and design costs. These funds would be used for the contractual services of two research specialists and a designer (\$90,000); for the required travel of these specialists to other museums and institutions for research and the identification of objects for the exhibition (\$20,000); for the conservation of objects (\$30,000); for the preparatory work needed to produce a catalogue and other educational materials (\$25,000); for the securing of reference materials and miscellaneous supplies needed during the planning stage (\$10,000); and for preparatory photography needed to develop the exhibition (\$5,000).

To plan the symposium associated with this exhibition, a total of \$25,000 is requested in this budget. Costs of the preliminary work for this symposium include convening small meetings of experts from other institutions in order to develop the most significant themes for discussion, to determine participants and subjects of papers, to plan for the publications which will result from the symposium, and to establish the general format for the occasion.

Workshops and planning meetings also are envisioned on other subjects. In FY 1986, several workshops are planned of about 15 experts each to explore the application of biological systematics to the pressing problems of biological diversity. An amount of \$15,000 is sought for this purpose.

Finally, 1 workyear and \$27,000 are requested for salaries and two positions to employ a programs director and education specialist in April-May 1986, the period when units will move into the completed Quadrangle structure. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) A further amount of \$20,000 is requested to purchase office automation equipment necessary for information management and other basic office equipment and supplies.

As currently envisioned, the programs director and education specialist are the only staff personnel responsible for the actual operation of the International Center. The former will be the person assigned the duties of scheduling programs, assuring that logistical requirements are met, coordinating Center activities with those of other units in the Quadrangle and elsewhere in the Institution, formulating plans for assessing public reaction to Center programs, and in general, maintaining systematic operation of the Center facility.

The International Center by definition will be a new Smithsonian educational enterprise. The education specialist is needed to develop educational outreach materials to complement exhibitions and other events, to act as liaison with local school systems and colleges and universities, to relate the Center's programs to those organizations engaged in continuing education, and to make available to all age groups and audiences the fullest benefits of the Center's offerings.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by allotments which will support nine positions in FY 1985 and ten in FY 1986 and for costs associated with the planning and development of research and exhibition programs for the Directorate (estimated expenditures of \$523,000 in FY 1985 and \$601,000 in FY 1986).

Restricted Funds - These funds will be provided from grants and other donations from individuals, foundations, organizations or corporations for specific purposes, such as mounting exhibitions and staging performances, film showings, and other public presentations in the International Center.

AMERICAN STUDIES AND FOLKLIFE PROGRAMS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTP**	Amount	FTP**	Amount
			FTP**	Amount	FTP**	Amount			FTP**	Amount
FY 1984 Actual	11	594	11	474	-	7	-	37	-	283
FY 1985 Base	8	688	13	563	-	37	-	208	-	403
FY 1986 Estimate	8	731	13	605	-	27	-	208	-	257

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	<u>Base FY 1985</u>	<u>Proposed Adjustments</u>	<u>Est. FY 1986</u>
FTE Allocation.....	8	0	8
11 Personnel Compensation.....	329	16	345
12 Personnel Benefits.....	39	2	41
21 Travel.....	10	-	10
22 Transportation of Things.....	5	-	5
23 Rent, Communications & Utilities....	15	1	16
24 Printing & Reproduction.....	49	4	53
25 Other Services.....	173	14	187
26 Supplies & Materials.....	49	4	53
31 Equipment.....	19	2	21
Total	<u>688</u>	<u>43</u>	<u>731</u>

Analysis of Increase

Necessary Pay.....	16
Inflation.....	13
Restoration of FY 1985 2% Reduction....	14

ABSTRACT - The Office of American Studies and the Office of Folklife Programs are engaged in the study of various aspects of American civilization. The Office of American Studies is active in researching and promoting academic pursuits in the field of study of material aspects of American society, while the Office of Folklife Programs concentrates on the study and presentation of folk cultures in the United States. Incidental to the study and presentation of American folkways, is a great interest in and exploration of the folklife traditions of other lands. An important activity of the Office of Folklife Programs is the staging of the Festival of American Folklife, which is the largest annual cultural event in the Nation's Capital. No program increase is requested for FY 1986. Necessary pay of \$16,000 is required for existing staff and an amount of \$13,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A

further amount of \$14,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - I. The Office of American Studies: With base resources of 2 workyears and \$100,000, the Office of American Studies sponsors a graduate program in American Studies in cooperation with various universities both within and outside the Washington metropolitan area. This graduate program provides a means for scholars and students to supplement their education in American studies with the unique resources of personnel, objects, manuscripts, and books available in the various bureaus of the Smithsonian. The Office enables graduate students in American studies or in American History from affiliated universities to undertake work at the Smithsonian Institution, thus providing a valuable complement to university education.

Four or five seminars a year are offered for academic credit and are taught by the director of the program and by scholars from cooperating universities. In addition to the regular American Studies courses offered to graduate students, a number of folklife courses have been added to the offerings in the past several years.

II. The Office of Folklife Programs: With base resources of 6 workyears and \$588,000, the Office of Folklife Programs studies the rich variety of folk traditions which are an integral part of American culture. The Office strives to foster an awareness and an understanding of the importance of folk culture in American society. The Office advocates a long-term commitment to the preservation and revitalization of folk cultures which are endangered by the encroachment of modern technological society. To this end, the Office of Folklife Programs presents various aspects of these folk cultures to general and scholarly audiences; collaborates with other Smithsonian bureaus in the production of folklife exhibitions; and works closely with government agencies on the development of programs to advance the Nation's interest in America's folklife heritage.

Exhibitions - In FY 1984, in cooperation with the Smithsonian Institution Traveling Exhibition Service (SITES), the Office of Folklife Programs developed a traveling exhibition on the surviving traditional potteries of southeastern United States entitled "Southeastern Potteries." The exhibition was on display at the National Museum of American History, where it was shown for eight weeks as part of the 1984 Festival of American Folklife. The exhibition was accompanied with the publication of the book, Raised in Clay: The Southeastern Pottery Tradition. The exhibit still is being shown at about 15 locations throughout the country.

The annual Festival of American Folklife has become the largest annual cultural event in the Nation's Capital. The Office of Folklife Programs is responsible for fund-raising, researching, planning, producing and presenting the Festival. This event has developed a large and loyal constituency throughout the Nation and has stimulated interest in the traditional arts of the regions from which the folk artists at the festival have come. Such interest has fostered research projects, local festivals modeled after the Smithsonian's Festival, and regional opportunities for traditional craftworkers and performing artists.

During the FY 1984 Festival of American Folklife, Alaska was featured in celebration of the State's 25th anniversary of statehood. This feature included a Native Alaskan component, an occupational component, and music, dance and crafts drawn from the State's diverse traditional cultures. Also featured at the FY 1984 Festival was a program on "Black Urban Expressive Culture from Philadelphia," which presented urban traditions in music, dance, and verbal artistry. The particular aspects of black urban expressive culture which were highlighted ranged from blues to gospel, tap dancing to street drills, and from traditional humor to "rapping." Another featured program of the FY 1984 Festival, "The Grand Generation: Folklore and Aging," celebrated the vital role that older

generations play in the preservation and perpetuation of America's cultural heritage and identity.

Planning is under way for the 19th Festival of American Folklife in FY 1985, which will feature a program on India to complement the nationwide Festival of India; a program on children's folklife; a program that explores the question of cultural conservation; and a program on black expressive culture.

Publications - The staff of the Office of Folklife Programs is involved in a broad range of publication projects that analyze and document folklife traditions. In 1978, the Smithsonian Folklife Studies Series was established to document the folkways of a variety of traditional cultures which are being practiced or are within living memory. This innovative series uses book-length monographs coupled with films to document and analyze various traditions. This hybrid format has proved a useful and important tool for the study of cultural processes. Recent projects in the Series include: "Jugtown: Pottery Tradition in Change," a documentary film of a North Carolina pottery; The Ojibwa Dance Drum: Its History and Construction, a monograph written to accompany the film "The Drummer"; and "At Laskiainen, In Palo Everyone is a Finn," a film documenting a Finnish-American mid-winter festival. The recent addition of an outside evaluations board for the Smithsonian Folklife Studies Series is contributing to the scholarly development of the Office of Folklife Programs.

Archives and Education - The archives of the Office of Folklife Programs is a repository for folkloristic materials which have been generated by Office activities. These materials include recordings of Festival performances; fieldwork interviews stemming from research done in preparation of the annual Festival; and documentation of other Office-sponsored publications and events, such as the film-monograph series projects and the Franklin Delano Roosevelt Centennial concert. The archives includes: 8,000 reels of audio tape; 2,500 audiocassettes; 4,700 rolls of black and white film; 20,000 color slides; 500,000 feet of motion picture film; 850 video tape recordings; and 220 cubic feet of files.

Inquiries are addressed regularly to archives staff by scholars and others engaged in research on traditional cultures. The archives is also a resource for visiting fellows who, since 1976, have utilized the resources of the Smithsonian Archives to pursue various year-long research projects. Subjects of research have included: Coal Miners and the Coal Industry, 1930-1960; Institutional Intervention in Traditional Liturgical Music; Occupational Folklife of Firefighting; Pre-Bluegrass Banjo-picking Styles; and The Use of the Harmonica in American Traditional Music.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds: I. Office of American Studies: Tuition reimbursement is received from the cooperating universities, principally the George Washington University and the University of Maryland, whose graduate students avail themselves of the courses offered by the Office of American Studies. The tuition reimbursement program is designed to reimburse the Institution for the use of its facilities by the students participating in Smithsonian classes and, in addition, to provide honoraria and reimbursement for the services of outside experts participating in the program (estimated expenditures of \$14,000 in FY 1985 and \$15,000 in FY 1986).

II. Office of Folklife Programs: Funds are provided by allotments and from concessions sales relating to the Festival of American Folklife (gross sales are normally \$25,000 to \$35,000). They support the salaries of 13 full-time employees as well as related support costs (estimated expenditures of \$563,000 in FY 1985 and \$605,000 in FY 1986).



\* Restricted Funds - Funds are provided in the form of individual gifts and grants from private foundations or corporations and are used to fund specific programs. Funds are anticipated from several sources to cover the costs of programs at the Festival of American Folklife (estimated expenditures of \$207,000 in FY 1985 and in FY 1986).

Federal Grants and Contracts - These are provided by various state and local governments for support of performances and programs at the annual Festival of American Folklife. In FY 1984, funds were received to support the costs of highlighting the folklife traditions of Alaska. Additional grant support is anticipated in future years for the Festival (estimated expenditures of \$403,000 in FY 1985 and \$257,000 in FY 1986).

INTERNATIONAL ENVIRONMENTAL SCIENCE PROGRAM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
FY 1984 Actual	11	687	-	-	-	-	-	-	-	-
FY 1985 Base	13	706	-	-	-	-	-	-	-	-
FY 1986 Estimate	13	747	-	-	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	13	0	13
11 Personnel Compensation.....	208	6	214
12 Personnel Benefits.....	25	1	26
21 Travel.....	96	-	96
22 Transportation of Things.....	4	-	4
24 Printing & Reproduction.....	3	-	3
25 Other Services.....	259	17	276
26 Supplies & Materials.....	65	9	74
31 Equipment.....	46	8	54
Total	<u>706</u>	<u>41</u>	<u>747</u>

Analysis of Increase

Necessary Pay.....	7
Inflation.....	20
Restoration of FY 1985 2% Reduction....	14

ABSTRACT - The International Environmental Science Program (IESP) coordinates the Institution's long-term monitoring and study of unique and significant ecosystems. Its goal is to evaluate biological diversity in order to understand and eventually predict the impact of human activities and natural change on the ecosystem. The Program is a multibureau, interdisciplinary effort. Research occurs at two permanent Smithsonian sites--the Tropical Research Institute in Panama and the Environmental Research Center in Maryland--as well as at several temporary sites throughout the world. No program increase is requested for FY 1986. Necessary pay of \$7,000 is required for existing staff and an amount of \$20,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$14,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Smithsonian's long tradition in international research and its unparalleled collections of natural history objects make it well qualified to sustain scientific activities abroad. The IESP provides support costs to enable teams of scientists to monitor natural variations in specific environments that are still unstressed by humans. A 1984 report from the Office of Technology Assessment entitled, "Technologies to Sustain Tropical Forest Resources," reemphasized the need to expand existing long-term monitoring programs, as a means of maintaining ecosystems, and to develop applied technologies to ensure the survival of rapidly diminishing tropical forests. The United States' strategic need for such monitoring activities was underscored by a United States interagency committee examining genetic diversity, which was chaired by the Agency for International Development (AID).

The Rhode River Estuary at Edgewater, Maryland, the tropical lowland forest of Barro Colorado Island, Panama, and the Galeta Reef on the Atlantic side of the Panama Canal have served as the Program's permanent research sites. Over the past ten years, scientists have been able to develop a long-term descriptive data base on the biological, physical and chemical components of these ecosystems. Analyses of data collected at these sites have produced concepts and verifiable hypotheses on the long-term patterns in climate and on the stresses and disturbances resulting from human activity. Mathematical models are being developed from the data to predict the effects of land uses and variation in climate upon nutrient discharge. Recent accomplishments at permanent sites for FY 1984 include:

A long-term study of rainfall and stream water on the Muddy Creek watershed of the Rhode River was published in 1984. The study showed that the acidity of bulk precipitation in the spring season increased steadily between 1974 and 1981. The acidity of freshwater streams draining the watershed also increased. Between 1982 and 1983, however, the acidity decreased slightly. This study is of importance because fish and amphibians spawn in the winter and spring, and a slight increase in acidity can be fatal to the eggs and larvae of many aquatic animals.

The cause (or causes) of acid rain is still being debated. Its effect, however, is being measured in a variety of ecosystems by environmental scientists. A separate comprehensive study on the Rhode River watershed has been published which concluded that the chemical reaction caused by the acidity was displacing essential plant nutrients such as magnesium, calcium, and potassium. Measurements of soil nutrient reserves indicated that these losses could be ecologically significant to forest plants within a few decades.

Several years of research at the Galeta Reef have resulted in the publication of a comprehensive inventory of the local invertebrate population.

At IESP's nonpermanent sites in Aldabra, Nepal, Venezuela, Brazil and Peru, scientists, with support from the host governments, are continuing their efforts to gather descriptive data that will aid in the development of verifiable hypotheses concerning genetic diversity, animal management, and natural area management. Recent accomplishments at nonpermanent sites for FY 1984 include:

Aldabra - The first visit to the atoll by scientists from the National Museum of Natural History revealed that views on the biogeography of the Indian Ocean were largely based on undocumented information. Collections from the intertidal region of the atoll yielded a variety of new species heretofore unknown to science. Information gleaned from the collections confirmed the fragility of the atoll's shallow habitats. This type of knowledge, while of great scientific importance, is critical to governments trying to establish tourism levels which do not undermine the delicate balance of the ecosystem.

Nepal - The final research project under the auspices of the Nepal Tiger Ecology Project was completed in December 1983. One researcher completed investigations on the

ecology of the endangered hog deer, Axis porcinus, a major prey of the tiger. In early 1984, the Nepalese Government and the Smithsonian signed an agreement to continue collaborative investigations on the ecology of the Nepalese terai (a lowland, grassy plain). This expanded program varies from previous work in that it explores the ecosystem at a macro level by concentrating on the relationships between climate, habitat, wildlife and the human population, which depends upon and interacts so vitally with the ecosystem of the terai. These studies are being conducted by scientists from the Smithsonian Tropical Research Institute, the National Zoological Park, the National Museum of Natural History, and their Nepalese counterparts.

Venezuela - Efforts are continuing to understand the llanos ecosystem of Venezuela. In FY 1983 and FY 1984, Smithsonian scientists and their colleagues studied red howler monkeys, iguanas, white-tailed deer, small mammals, and aquatic beetles. Significant progress was made in developing an adequate data base to facilitate understanding of the genetic structure and dynamics of the local population of howler monkeys. These data are essential for testing sociobiological hypotheses for primates, as well as for developing strategies for primate conservation. A recent dam project near the study area is being monitored for its potential effects on wildlife. An intensive two-year investigation of iguanas was completed and will be used as part of a larger effort to document iguana populations in the tropics. Research on the behavior and breeding cycles of iguanas is significant since they are an important food source for humans in the tropics.

Brazil/Peru - Amazonia - Fieldwork and publication of research results continue at sites in the Amazon region where scientists are studying the systematics and ecology of plant and animal groups. This provides an important means of monitoring the rapid change in the region. Fieldwork continues in botany, entomology, herpetology, and ichthyology. Significant recent accomplishments include the discovery of a new genus of bamboo in the Organ Mountains in the State of Rio de Janeiro, and the collection of seeds from a rare local bamboo in Bahia State. New archeological discoveries in the State of Rondonia spurred the state officials to build a new museum to exhibit and study the artifacts found.

Brazil (Golden Lion Tamarin Project) - During FY 1984, significant progress was made in efforts to repatriate the highly endangered primate, the golden lion tamarin, to its native habitat in Brazil. Efforts began to observe, capture, and track via radiotelemetry wild groups of tamarins in the Poco d'Anta Reserve to improve understanding of their habits in the wild. In addition to these efforts, an active program of reforestation and habitat rehabilitation is taking place in the Reserve to make repatriations more successful. Successful translocation is an important factor because future conservation of these animals will involve moving family groups from forest areas slated for destruction into forests which are to be preserved. Many goals of this effort have been realized. Threatened fauna from outside the Reserve have been translocated successfully to within the Reserve. In November 1983, 15 golden lion tamarins bred in United States zoos were brought to Brazil for acclimatization and in April-May 1984, they were released in their native habitat. This project is being coordinated with Brazilian conservation and research organizations, as well as with those inhabitants living in close proximity to the Reserve.

Evaluation of Program - IESP is involved in an ongoing process of evaluation to ensure the quality of the research. The IESP programs regularly are subject to a variety of peer reviews. In June 1984, there were site visits to Panama and Edgewater by a panel of outside scientists to review and evaluate the current programs and their progress. These visits resulted in recommendations which were taken into consideration in planning the future direction of research at the Panama and Edgewater sites.

Over the next five years, it is anticipated that work will continue at all program sites. In Panama, IESP scientists propose to enlarge the scope of the research program to

include the Montane Tropical Rain Forest in Chiriqui. The main objective would be to compare a low altitude tropical forest at about sea level to this high altitude (6000-7000 ft.) tropical forest by recording plant and animal species, monitoring physical factors and measuring net productivity. It is known that the soil in high altitude forests is generally superior to that in lowland forests. This results in greater pressure to convert high altitude forests to agricultural use, which reduces the number of tropical forests. Researchers also plan to continue to expand long-term studies of the effect of natural climate variability on a selected population of organisms.

At the nonpermanent sites, efforts will continue to monitor the ecosystems under study in order to understand the complexities of tropical and subtropical ecosystems. On Aldabra, specialists in invertebrate and vertebrate studies will continue to assess the conditions of this unstressed atoll. In Nepal, extensive studies will be undertaken on the interaction of seasonal fire, large herbivores and woodland habitats. These efforts are supplemented by AID-sponsored studies on fire ecology in grasslands and the ecology of human populations surrounding the Chitwan National Park. This research represents the only ecosystem study of this magnitude conducted in the ecologically imperiled South Asian subcontinent. In Brazil, efforts are expanding to offshore areas to comprehend better the interaction of aquatic plants with marine life. Monitoring of the released golden lion tamarins will continue in order to assess the viability of species reintroduction programs.

ACADEMIC AND EDUCATIONAL PROGRAMS

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds		& CONTRACTS	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	24	717	3	251	-	1,282	-	133	-	-
FY 1985 Base	21	752	7	354	-	1,585	-	342	-	-
FY 1986 Estimate	21	2,793	7	368	-	1,856	-	425	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	21	0	21
11 Personnel Compensation.....	554	19	573
12 Personnel Benefits.....	69	2	71
21 Travel.....	20	26	46
23 Rent, Communications & Utilities....	4	5	9
24 Printing & Reproduction.....	47	9	56
25 Other Services.....	41	28	69
26 Supplies & Materials.....	10	1	11
31 Equipment.....	7	1	8
41 Grants.....	-	1,950	1,950
Total	752	2,041	2,793

Analysis of Increase

Necessary Pay.....	21
Inflation.....	5
Restoration of FY 1985 2% Reduction....	15
Program Funds.....	2,000

ABSTRACT - Research and education are basic to the nature of the Smithsonian, and have led the Institution to promote scholarly and academic ties with other learned institutions and to offer its resources--its collections, professional staff, libraries, laboratories and field sites--to the general public and to the academic community for the advancement of learning. These scholarly and academic ties are developed and maintained through a system of competitive awards for research projects, programs in higher education, symposia and seminars, and learning opportunities at the elementary and secondary levels which are provided by the Office of Fellowships and Grants (OFG), the Office of Smithsonian Symposia and Seminars (OSSS), and the Office of Elementary and Secondary Education (OESE). For FY 1986, an increase of \$2,000,000 is requested to provide support to American overseas research centers. Necessary pay of \$21,000 is required for existing

staff and an amount of \$5,000 is sought to compensate for the effects of inflation in nonsalary areas of inflation. A further amount of \$15,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - I. The Office of Fellowships and Grants: With base funding of 11 workyears and \$333,000, the Office of Fellowships and Grants manages Smithsonian fellowships and related academic appointments, and administers the Special Foreign Currency Program which provides grants to American institutions for research in "excess" foreign currency countries. Resources for administration of these programs are included here, as are costs of Institutional fellowships. The Special Foreign Currency Program is treated in greater detail in the section of this budget devoted, to that appropriation.

Academic appointments and Smithsonian Foreign Currency Program grants are intended to enhance Smithsonian research and to foster relationships between the Institution and universities, museums, and research centers situated in the United States and abroad. Fellowships and internships enable the Smithsonian to encourage the work of new and established scholars, to profit from an intellectual interchange with these scholars and to ensure full use of Smithsonian research resources.

The National Collections held by the Smithsonian as well as the curators and scholars who study them, offer unparalleled and essential resources for specialized study. The ready availability of Smithsonian historical and anthropological objects, original works of art, natural history specimens, living animals and plants, and ecological systems to the university researcher, thus, makes the Smithsonian an irreplaceable complement to university education.

Smithsonian resources are available nationally and internationally to students and scholars. Access to these resources is facilitated by various forms of financial support offered by the Smithsonian. Stipends are awarded throughout the Institution with nonappropriated Trust funds, enabling fellows to work in all research areas of the Institution and to pursue interdisciplinary projects which draw upon the resources of several bureaus. In FY 1984, pre- and post-doctoral fellowship awards were made to 85 fellows from 52 colleges and universities bringing the total since 1965 to 1,205 fellows from 228 colleges and universities. Additional fellowships which provide research opportunities more closely tied to current bureau programs and interests, are offered with nonappropriated Trust funds or appropriated funds designated for the bureaus.

In addition to fellowships for students and younger scholars, a few awards are offered at the senior level to scholars of distinction, breadth of intellect, and proven accomplishment. Now in its fifth year, the Regents Fellowship Program, supported with nonappropriated Trust funds, continues to bring distinguished visiting scholars to the Institution. In FY 1983, the Smithsonian established the James E. Webb Fellowships, named in honor of the distinguished former Administrator of the National Aeronautics and Space Administration and Regent Emeritus of the Smithsonian Institution, to promote excellence in the management of cultural and scientific organizations. Awards are given to persons from within and without the Institution to pursue individual interests in formal academic and work situations.

The Office of Fellowships and Grants coordinates Smithsonian academic internships by: informing students and organizations of the opportunities available; distributing applications; and administering internship stipends. The Office, in conjunction with other Smithsonian offices and bureaus, also assists with the activities of the Smithsonian's internship council. In FY 1984, 67 students were awarded internship stipends, 24 of whom were minority students. These interns were supported with nonappropriated Trust funds as part of the Institution's efforts to increase minority participation in its academic and

educational programs. In addition, six fellowships were awarded to minority faculty members. In January 1983, the Office also assumed responsibility for the Cooperative Education Program, which, over the course of FY 1984, placed 13 students in positions throughout the Institution. This year four students, thus far, have begun appointments. It is hoped that some permanent employment opportunities may develop from these placements. The Institution will continue these special efforts through internships, faculty fellowships and cooperative education appointments.

II. Office of Smithsonian Symposia and Seminars - With base funding of 3 workyears and \$99,000, the Office of Smithsonian Symposia and Seminars (OSSS) designs programs linking the humanities and sciences. As an interdisciplinary program which assembles diverse worlds of contemporary scholarship, the OSSS organizes projects serving advanced scholars, intermediate students, concerned professionals, and the serious lay public. Its programs further the increase and diffusion of knowledge, through a broad variety of intellectual specialities. The Office's emphasis on themes of current significance attracting interdisciplinary attention is reflected in the organization and administration of the Smithsonian's international symposia series, continuing seminar series, individual working seminars, and special orientation activities.

Continuing a long-established policy of publishing educational materials based on symposia and other programs, the OSSS works toward extending the audience and life of its themes through the diversified diffusion of knowledge. The Smithsonian's eighth international symposium, "High Technology and Human Freedom," will be available in two books (one published by the Smithsonian Institution Press and one by a commercial trade house); in various reprints; in a specially edited academic guide for use in liberal arts curricula; and in a videocassette which also draws on the seventh symposium, "How Humans Adapt: A Biocultural Odyssey." The Office also makes available to schools and libraries souvenir programs from earlier events and a specially packaged "Kin and Communities" cassette kit.

In 1984, the Office's attention was directed toward preliminary planning for the observance of the Bicentennial of the Constitution in 1987. Special attention will be placed on the Bill of Rights and the Federalist Papers and their roles in the rise of modern self-governing societies.

III. Office of Elementary and Secondary Education - With base funding of 7 workyears and \$320,000, the primary function of the Office of Elementary and Secondary Education (OESE) is to make Smithsonian resources for learning and teaching available to local and national school communities and to other specialized audiences. Working in conjunction with other Smithsonian education offices, OESE is able to provide pan-Institutional programming for elementary and secondary schools. Activities include publications and audio-visual materials for teachers and students; workshops; seminars and courses for teachers, librarians and other curriculum specialists; a Career Awareness Program for minority young people from the District of Columbia Public Schools; and a summer intern program for high school students. The Office also coordinates a wide range of services for disabled visitors to the Smithsonian.

OESE offers a number of programs to encourage cooperation and exchange of information between the Smithsonian and educators. Two publications--"Let's Go" (a bimonthly newsletter) and "Through Looking to Learning: The Museum Adventure" (an annual booklet)--inform teachers in the Washington, D.C. area of the variety of educational opportunities available at the Smithsonian. These publications are sent to approximately 11,000 teachers. The Office also distributes ART TO ZOO, a classroom newspaper, to more than 50,000 teachers and museum education departments throughout the United States; and circulates free of charge a slide loan package entitled "The Museum Idea," which reached an estimated 1,500 students during the 1983-84 school year.



During FY 1984, a workshop and seminar program for teachers attracted approximately 900 participants to 38 programs, including six summer courses enabling the development of curriculum units based on the Smithsonian's collections. Summer programs for teachers include an orientation series introducing participants to a variety of Smithsonian resources, and a series of in-depth, one-week seminars on such topics as teaching life sciences through direct observation, museums and language development, and teaching American cultural history through art.

In FY 1984 and FY 1985, a series of OESE-sponsored "Regional Workshops" is being given in communities across the United States to promote the use of museums as educational resources. Among the regions taking part are Tidewater, Virginia; Gulf Coast, Mississippi; Charleston, South Carolina; and Oakland, California. Approximately 2,000 teachers will be reached by this program in the course of an 18-month period. At the same time, three additional Regional Workshops are planned for FY 1986; these will take place in Waterloo, Iowa; Philadelphia, Pennsylvania; and Jackson, Michigan and reach approximately 1,200 teachers.

The Office continues its work to make Smithsonian programs accessible to disabled visitors by providing guidance to the various Smithsonian museums which are seeking ways to offer more effective programming for the retarded, and for hearing or sight impaired visitors. Sign language classes are given to teach Smithsonian educators, guards and other employees how to communicate with hearing impaired visitors. A simplified guide-book to the Smithsonian was produced for retarded and hearing impaired persons; and an "outreach kit" was developed to encourage reading and writing among language-delayed students. OESE will maintain these specialized services to ensure better access by disabled visitors to Smithsonian resources.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, the Smithsonian Institution is requesting a sum of \$2,000,000 in support of American overseas research centers for advanced research.

#### Background

American overseas centers for advanced research represent a geographically widespread network of institutions situated in foreign countries, but affiliated with or operated by a non-governmental American parent organization. This request addresses the needs of ten such centers, operating in 14 countries in the Mediterranean region, the Near East and Asia. Each of these countries represents an area of special concern to the United States.

The centers have joined together in a Council of American Overseas Research Centers (CAORC). (Member organizations are listed at the end of this statement.) CAORC forms the basis for cooperative efforts among the individual centers, for identifying any other advanced research centers now in existence and for considering jointly the needs and opportunities for the formation of new centers in other regions.

#### Contributions of the Advanced Research Centers

Each center has developed in response to American scholarly interest in the primary research resources of the host country in question. Although the focus of the early centers was archaeology and classical civilization, over the years the newer centers have supported a broader range of scholarly questions. The centers provide an important American presence, despite the fact that they are not government agencies. Nonetheless, they are seen by their host countries as the foreign arm of American higher learning, not unlike the government-sponsored institutes of Germany, France and the United Kingdom.

Functions performed by the centers are:

- providing training for young U.S. scholars and facilities for advanced U.S. scholars doing research in and on the cultural area;
- providing grants and/or facilities for host country scholars or those of third country origin;
- maintaining scholarly libraries in the field;
- maintaining a liaison with the host country's intellectual community, and national authorities for the purpose of visas and other permissions;
- publishing occasional papers and scholarly journals as well as newsletters and more popular writings;
- serving as the focal point for the systematic accumulation and dissemination of knowledge regarding the areas.

Several centers also perform the following functions:

- sponsor major, long-term research projects and excavations including loan and storage of technical equipment;
- provide language training;
- offer symposia, formal classes, short-term courses and lectures to specialists and sometimes to the general public;
- actively engage in the preservation of the past, both in writing and scholarship and in the physical preservation of antiquities.

The Centers represent an aggregate of over three hundred years' experience in research and operation in foreign countries. Some have been the base of operations for virtually every American specialist in the host country in which they operate. Finally, they are the recognized extensions of the advanced foreign research programs of every major American university, many of which contribute annually to their support.

#### How They Are Governed and Financed

While most of the centers are consortia of American universities, colleges and museums, others are autonomous institutions with assets vested in a board of trustees. The centers differ in how they are financed as well as in the adequacy of their income. Most have arrangements for subscriptions and memberships, and for a few this is their chief source of core support. Special foreign currency programs, at various times, have supported the centers in Israel, Egypt and India. Two centers have endowments which were sufficient to handle most past needs, but fail to cover present and future requirements. Grants from the U.S. Government, especially the National Endowment for the Humanities and the U.S. Information Agency have, at some time, supported programs of all of the centers. These grants do not support costs of administration or general fellowship activities, the two basic and pressing needs which this plan seeks to address. Foundations provide both core support and project assistance to several centers. Other centers perform services for fees, collect tuitions, and rent equipment.

The combined 1984 budgets of all centers is approximately \$8 million. They range individually from \$100,000 to \$2 million.

The centers now face a perilous financial situation that threatens their continued existence. Inflation is affecting the Centers. Maintaining existing levels of programs has led to funding deficits, even by the two centers which enjoy substantial endowments. Other centers, such as the American Research Center in Egypt, that have previously relied on excess foreign currencies, now face greatly reduced funding. At least five of the centers have been barely able to continue operation.

It is useful to consider what would happen if the centers closed. The answer varies by center and field. In some instances such as Athens and Rome, American scholarship would not cease, although the opportunities for exchange with fellow American scholars and with host country scholars would become fewer and more random. It would also be more difficult to negotiate with governmental and institutional systems for access to research resources. In other instances, such as India, Turkey and Yemen, field scholarships probably would decline or cease altogether. The proposed amount of \$2,000,000 is critical to the continued existence and future well-being of these organizations.

#### Administration of the Program

Using staff expertise and well-established advisory councils which evaluate special Foreign Currency Program proposals, this program will be administered by the Smithsonian through its Office of Fellowships and Grants. The proposed funding will be allocated as grants on a competitive basis to all individual centers meeting program guidelines. The guidelines will require that a center be the arm of an American academic institution or consortium, that its fundamental purpose be to further advance research by American scholars in the host country, and that it support a facility in that country. Proposals will be accepted from centers for the purposes of funding the basic administrative costs of their operations and for the maintenance of a fellowship program. Additional costs for other programs, such as research projects, seminars and conferences, publications, language training, etc., will not be eligible for support under this program.

Funding for basic administrative costs also may be sought by the centers acting together to take measures that are more effectively accomplished together than separately. These include collecting and preparing for public distribution materials explaining the centers, sharing scholarly information to enhance the efforts of individual scholars, sharing managerial experiences to improve the operations of those largely volunteer-run organizations and to enter into planning for joint programs, publications, indices and other services to the field.

#### Listing of the Members of the Council of American Overseas Research Centers

The American Academy in Rome  
The American Institute of Indian Studies  
The American Institute of Iranian Studies  
The American Institute for Pakistan Studies  
The American Institute for Yemeni Studies  
The American Research Center in Egypt  
The American Research Institute in Turkey  
The American School of Classical Studies at Athens  
The American Schools of Oriental Research (Israel, Jordan, Cyprus)  
The Universities Service Centre, Hong Kong

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - I. Office of Fellowships and Grants: These are provided from allotments which are designated primarily for the Institution's fellowship program. In FY 1984, 85 awards were made to fellows from 52 colleges and universities. Since 1965, 1,205 awards have been made to fellows from 228 schools (estimated expenditures of \$1,175,000 in FY 1985 and \$1,410,000 in FY 1986).

In addition to fellowships for students and younger scholars, a few awards are offered annually at the senior level to scholars and scientists. Now in its fifth year, the Regents Fellowship Program continues to bring distinguished visiting scholars to the Institution (estimated expenditures of \$130,000 in FY 1985 and \$140,000 in FY 1986). To promote excellence in the management of cultural and scientific organizations, the Smithsonian established the James E. Webb Fellowships (estimated expenditures of \$25,000 in FY 1985 and in FY 1986). Funding is provided to cover the stipends for minority internships and faculty fellowships (estimated expenditures of \$80,000 in FY 1985 and \$85,000 in FY 1986). Starting in FY 1985, funding has been provided for three new fellowship programs: (1) an integrated program aimed at Native American studies and people (estimated expenditures of \$50,000 in FY 1985 and in FY 1986); (2) a three-year Masters program for students with postgraduate course work and intern experience in conservation laboratories (estimated expenditures of \$90,000 in FY 1985 and in FY 1986); and (3) a two-year pilot program to support a cooperative effort with Howard University (estimated expenditures of \$25,000 in FY 1985 and in FY 1986).

An allotment supports a portion of the administration of the Office of Fellowships and Grants academic programs (estimated expenditures of \$86,000 in FY 1985 and \$85,000 in FY 1986) and a small allotment for administrative costs for the Council of American Overseas Research Centers (\$2,000). Funds also are used to support the Cooperative Education Program for graduate and undergraduate students on study-related work appointments (estimated expenditures of \$33,000 in FY 1985 and \$35,000 in FY 1986).

II. Office of Smithsonian Symposia and Seminars: An allotment is provided for salary and support costs for two staff members (estimated expenditures of \$119,000 in FY 1985 and \$122,000 in FY 1986). In FY 1984, \$45,000 from the Institution's Educational Outreach fund supported the symposium on "The Road after 1984: High Technology and Human Freedom."

III. Office of Elementary and Secondary Education: OESE's summer intern program gives 34 graduating high school students an opportunity to participate in learning-service programs in the Smithsonian museums. In addition, the Career Awareness Program for the District of Columbia Public Schools introduces minority young people to career opportunities at the Smithsonian (estimated expenditures of both programs are \$112,000 in FY 1985 and \$122,000 in FY 1986). In FY 1984, \$34,000 from the Institution's Educational Outreach fund provided support for the development and testing of a Smithsonian-wide publication program.

Restricted Funds - I. Office of Fellowships and Grants: These consist of restricted endowments, gifts and grants from individuals, foundations, organizations or corporations which specify their use for a particular project. For example, an endowment from the Walter Rathbone Bacon Scholarship supports awards and research on fauna from outside the United States (estimated expenditures of \$15,000 in FY 1985 and in FY 1986). A Rockefeller Foundation grant will support fellowships for the National Museum of African Art and the Sackler Gallery (estimated expenditures of \$50,000 in FY 1985 and in FY 1986).

II. Office of Smithsonian Symposia and Seminars: Funds are being sought to support this Office's participation in the Festival of India in June 1985 (estimated expenditures of \$41,000 in FY 1985); and for the planning of a seminar for the observance of the Bicentennial of the Constitution (estimated expenditures of \$47,000 in FY 1986).

III. Office of Elementary and Secondary Education: Since 1979, the program, "Exploring the Smithsonian" has been coordinated by OESE for the District of Columbia Public Schools. The program is partially supported by a grant from the Gwendolyn Cafritz Foundation and provides bus transportation to bring junior high school students to Smithsonian museums to take part in a selection of interdisciplinary lessons on

curriculum-related subjects in art, history and science. OESE works with the various Smithsonian education offices to plan and maintain the program activities. More than 4,000 students participated in "Exploring the Smithsonian" during the 1983/84 school year (estimated expenditures of \$23,000 in FY 1985 and \$24,000 in FY 1986). A cooperative effort between OESE and the Children's Hospital National Medical Center, begun in FY 1980 with support from the Institution's Educational Outreach fund, is currently developing activity packets, based on the Smithsonian collections, for distribution to hospitalized children between the ages of five and eighteen throughout the United States. Corporate funding is now being sought to enable completion of this project in FY 1985 (estimated expenditures of \$24,000 in FY 1985).

An anthropology curriculum kit, supported by a variety of unrestricted funds, was developed by OESE in cooperation with the National Museum of Natural History's Department of Anthropology and the Smithsonian Institution Press. During the 1983/84 school year, it was tested in 800 classrooms in Alaska and other parts of the United States, and at the same time OESE is seeking corporate funding to support the production of an entire series of such curriculum packets for secondary schools (estimated expenditures of \$69,000 in FY 1985 and \$133,000 in FY 1986). In addition, a new publishing project to produce a periodical designed to share information about the Smithsonian's research and collections with young adolescents in schools across the nation is being undertaken by OESE and the Office of Public Affairs. Two issues of this publication tentatively entitled Smithsonian JOURNEYS, are being tested in FY 1985 (estimated expenditures of \$115,000 in FY 1985 and \$155,000 in FY 1986).

COLLECTIONS MANAGEMENT/INVENTORY PROGRAM

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FUND		FUND	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	46	879	-	-	-	-	-	-	-	-
FY 1985 Base	38	858	-	-	-	-	-	-	-	-
FY 1986 Estimate	38	1,147	-	-	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	38	0	38
11 Personnel Compensation.....	528	27	555
12 Personnel Benefits.....	71	1	72
25 Other Services.....	240	201	441
26 Supplies & Materials.....	16	28	44
31 Equipment.....	3	32	35
Total	<u>858</u>	<u>289</u>	<u>1,147</u>

Analysis of Increase

Necessary Pay.....	11
Inflation.....	11
Restoration of FY 1985 2% Reduction....	17
Program Funds.....	250

ABSTRACT - In September 1978, the Institution developed a plan for scheduling and performing inventories of its collections. In FY 1979, a special appropriation of \$500,000 was made to the Institution to accelerate the process. An amount totaling \$4.8 million through FY 1985 has been provided to continue the inventory program. These funds have been applied to major inventory projects in the three museums where the need for additional effort was of the greatest urgency: the National Museum of Natural History/Museum of Man (NMNH/MOM), the National Museum of American History (NMAH) both of which will move some of their collections to the Museum Support Center, and the Cooper-Hewitt Museum, whose collections had not been inventoried fully prior to the Museum's transfer to the Smithsonian. In FY 1985 and in FY 1986, resources of this program again will be applied mainly to these three museums to allow them to continue the inventory process. Major emphasis will be placed on continuing efforts to refine inventory data, to match it with existing collection records and to reconcile any differences which may be discovered between the two sets of information. Additionally, there is provision in the FY 1986 request for the Archives of American Art to advance its inventory.

For FY 1986, a sum of \$1,147,000 is requested for this program, an increase of \$289,000 over the FY 1985 base. This amount includes a program increase of \$250,000, necessary pay of \$11,000 for existing staff and an amount of \$11,000 to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$17,000 is included to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - In June 1983, the Institution completed the first inventory of its collections. The inventory was conducted under a policy established by the Smithsonian in 1978 as part of a collections management program designed to ascertain the full extent of the Institution's holdings and to assure continuing accountability by the maintenance of comprehensive records of those holdings.

For the initial inventory, each Smithsonian museum established schedules, procedures and information requirements appropriate to the size and nature of its collections. Because of the comparatively smaller numbers of objects and specimens held, most Smithsonian museums (National Museum of African Art, Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Portrait Gallery, National Museum of American Art, National Air and Space Museum) and the National Zoological Park were able to complete their inventories within the five-year period using their base resources. Additional funding, made available through appropriations beginning in FY 1979, was used each year to supplement base resources of the National Museum of Natural History/Museum of Man, the National Museum of American History and the Cooper-Hewitt Museum to assist those museums with special inventory problems. The National Museum of Natural History/Museum of Man, with approximately 84 million specimens, and the National Museum of American History, with approximately 16 million objects, required additional resources to manage the extremely large volumes of materials to be inventoried. The Cooper-Hewitt Museum, whose collections had not been inventoried prior to their transfer to the Institution, required extra assistance to create an accurate and comprehensive current record of its collections. Effective utilization of the inventory record requires that these three museums continue to refine the vast amount of data accumulated during the inventory process, to maintain the record on a current basis, and for particularly important collections, to reconcile the new records with the older catalogue information.

The projected base of \$1,147,000 will be used in FY 1986 to enable the National Museum of Natural History/Museum of Man, the National Museum of American History and the Cooper-Hewitt Museum to continue the process of refinement, maintenance and reconciliation of inventory data, and allow the Archives of American Art to initiate inventory procedures. Each organization has devised and is pursuing specific plans for these processes. The following chart indicates base resources of the NMNH/MOM, NMAH and the Cooper-Hewitt Museum that are applied to collections management efforts and displays the portions of the FY 1985 appropriation and the FY 1986 estimate that will be allocated to these selected museums, the Archives of American Art, the Office of Information Resource Management, and the Office of the Registrar.

COLLECTIONS MANAGEMENT/INVENTORY PROGRAM

(Dollars in Thousands)

	<u>Natural History</u>	<u>American History</u>	<u>Cooper- Hewitt</u>	<u>Other</u>	<u>Total</u>
FY 1985 Base Resources	\$ 857	\$ 800/1	\$ 70	\$ -	\$1,727
FY 1985 Estimated Portion of \$840,000 /2	<u>400</u>	<u>306</u>	<u>80</u>	<u>54 /3</u>	<u>840</u>
TOTAL FY 1985	<u>\$1,257</u> =====	<u>\$1,106</u> =====	<u>\$150</u> =====	<u>\$ 54</u> =====	<u>\$2,567</u> =====
FY 1986 Base Resources	\$ 857	\$ 741	\$ 70	\$ -	\$1,668
FY 1986 Estimated Portion of \$1,147,000	<u>517</u>	<u>418</u>	<u>84</u>	<u>128 /4</u>	<u>1,147</u>
TOTAL FY 1986	<u>\$1,374</u> =====	<u>\$1,159</u> =====	<u>\$154</u> =====	<u>\$128</u> =====	<u>\$2,815</u> =====

/1 Includes registration functions.

/2 FY 1985 Congressional appropriation. Pending supplemental request not included.

/3 In FY 1985, this amount is planned to be allocated to the Office of Information Resource Management.

/4 For FY 1986, this amount is planned to be allocated to the Archives of American Art (\$65,000); Office of Information Resource Management (\$58,000); and the Office of the Registrar (\$5,000).

The following narrative describes the specific progress made by the NMNH/MOM, the NMAH, and the Cooper-Hewitt Museum and addresses the immediate inventory tasks that are before them.

National Museum of Natural History/Museum of Man

The National Museum of Natural History/Museum of Man conducted its initial baseline inventory at three levels: specimen level, covering individual specimens of outstanding scientific merit and/or high intrinsic value; the batch level, covering medium-sized groups of related specimens; and the collection level, consisting of large assemblies of related materials. At the batch and collection levels, the number of specimens covered by each inventory record was estimated following careful sampling of each group of materials.

In FY 1984, the Museum made progress in its collection inventories. Much effort was put into consolidating the inventory gains made during the previous five years while preparing for the future moves of many inventoried collections to the Museum Support Center.

High priority was given in the Department of Anthropology in FY 1984 to resolving discrepancies identified in previous inventory years when the catalogue was matched with the shelf inventory. It is expected that by FY 1985 discrepancies will be reduced to one



or two percent of the total collection. In the Department of Botany, the inventory of type specimens (i.e., those which set standards for the species) is in a maintenance phase, but new specimens continue to be added. Considerable progress also was made in FY 1984 on the inventory of 56,000 specimens in the Francis Drouet Collection of blue-green algae, which is the most important collection of such specimens in the world. In the Department of Entomology, progress was made toward the reconciliation of type specimens to which it gives high priority. Reconciliation of the collections of gems and minerals in the Department of Mineral Sciences is virtually complete. New inventories were completed in the Department of Paleobiology for the Mississippian and Pennsylvanian stratigraphic collections scheduled to be moved to the Museum Support Center. The Department also made substantial progress in cataloguing many type specimens found uncatalogued during the inventory, as well as type specimens recently added to the collections. The Department of Invertebrate Zoology reconciled and refined the crustacean and mollusk type inventories, and added new worm types to the inventory. In the Department of Vertebrate Zoology, the North American freshwater fish inventory file was proofed and data labels produced for the specimen jars in preparation for the move of the entire collection to the Museum Support Center. The inventory of the bone collection in the Bird Division is near completion.

The Museum also has made considerable progress in automating its registration system, which is important to inventory control; a full production system is being programmed to run on a mini-computer. The system allows authorized curators and technicians to interactively enter and update registration transactions (loans, accessions, etc.) through terminals in their units and immediately print shipping invoices, letters and other documents.

In FY 1986 and beyond, the National Museum of Natural History/Museum of Man will give high priority to maintaining the inventory as the collections change. Some of this maintenance effort is associated with the move of specimens to the Museum Support Center which requires changes in specimen location and certain other inventory data. Other maintenance work will be done when the computer files are moved from the current system onto the new Collection Information System. Some of the requested resources also will be devoted to enhancement of the inventory data for collections management and scholarly purposes by making data more precise and improving its value for information retrieval purposes. The Museum also will undertake specimen-level inventories of collections inventoried previously at the batch or collection level, with priorities being given to collections going to the Museum Support Center and collections that are of high interest to scholars. Examples of such collections are the Maryland collection of fossil plants, plants from the Washington metropolitan area, the orchid collection, selected fossil mammals and certain fossils to be moved to the Museum Support Center.

#### National Museum of American History

Beginning in FY 1984 and continuing into FY 1985, all collecting units in the National Museum of American History have been receiving printouts with which they are able to verify inventory data collected during the five-year inventory. In FY 1985, the Museum will put into place an automated collections information tracking system. This integrated system will allow the various offices of the Registrar and the collecting units of the Museum to enter information pertaining to object transactions directly and promptly, and thus eliminate the need for duplicate entries of the same information by the several offices. The National Numismatic Collections and the National Philatelic Collections will increase the refinement effort to identify group records that must be converted to individual records, to correct improperly recorded data and to add essential information. Under the refinement process, the National Numismatic Collections and the National Philatelic Collections will receive the greatest amount of attention due to the vast numbers of items in these collections. The Museum anticipates spending four years to refine numbers while they continue to deal with a backlog of items to be entered into

the computerized inventory file. Photography of selected objects for improved security continued in FY 1984. The Museum, as part of its five-year plan for the National Philatelic Collections, will continue to reorganize holdings, establish a master collection, and reacquisition and recatalogue many of the collections to improve registration documentation. In FY 1985, the Museum also will begin a five-year effort to clean asbestos dust from nearly one million museum objects located in its storage buildings in Suitland, Maryland.

In FY 1986, the Museum will initiate refinement efforts for some of the objects undergoing cleaning at the Suitland facility. A large percentage of the objects at this facility have less than satisfactory accompanying descriptions, largely because of the asbestos health hazard present in those buildings when the inventory was conducted. In the Mall building, refinement work in collecting units in addition to the National Numismatic Collections and the National Philatelic Collections will receive greater emphasis. Microphotography of objects in the National Numismatic Collections will resume and be completed. In FY 1986, the Museum will begin to recover, sort and refile pre-1958 accession records currently held by the Smithsonian Archives. This is an important part of the effort to reconcile registration and other collections information with the data collected during the inventory.

#### Cooper-Hewitt Museum

At the Cooper-Hewitt Museum, there are three major tasks planned for future collections management/inventory activities in FY 1986 and beyond: continuous, cyclical inventories of the permanent collections; reconciliation of discrepancies revealed by matching FY 1978 through FY 1983 physical inventory records to accession records; and refinement of automated data base records for each inventoried object.

To proceed with each of these tasks, a technician in each of the three major curatorial departments will work one day each week with a technician from the Registrar's Office to re-inventory selected portions of the collection. This approach will permit complete re-inventory of all collections every seven years. Simultaneously, discrepancies surfacing in the records-matching process will be reconciled as part of the ongoing collections management effort. Since the bulk of the collections which came from the Cooper Union Museum were inadequately documented, particular attention will be paid to reconciliation for the next seven years as cyclical inventories take place. As problems are resolved by the curatorial departments, records will be amended. Efforts to create improved documentation of the inventoried collections will continue at least through FY 1985 with the aid of a grant from the New York State Council on the Arts. Plans will be drafted for removal of the collections now stored in the McAlpin-Miller townhouse to temporary storage while renovation of that facility proceeds.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, the Institution requests an increase of \$250,000 to initiate inventory procedures in the Archives of American Art which holds valuable archival-type materials; to make use of improved technology to maintain inventory records more efficiently; and to meet costs associated with increased computer usage required for controlling inventories and collections.

The Archives of American Art requests \$65,000 to continue a three-year program, begun in FY 1985 with base resources, to refine its inventory of works of art contained within its archival collections. The initial inventory, performed between 1980 and 1982, was based upon accession records which cover some eight million documents but which did not always indicate that works of art were incorporated in the archival material. The Archives plans to refine these records by conducting a shelf inventory, identifying the works of art and making a record of such basic information as mediums, titles, signatures and measurements. During this process, steps will be taken to assure the preservation of some 2,500 linear feet of archival records. These steps will include such measures as

reboxing, enclosure in acid-free folders, encapsulation and removal of metal clips. Items requiring more extensive attention will be identified for subsequent conservation treatment. A survey of the photographic collection also will be conducted in which prints will be identified and conservation needs evaluated.

The National Museum of Natural History/Museum of Man and the National Museum of American History request an additional \$95,000 and \$90,000 respectively for the use of recently developed technologies which provide more efficient methods for tracking the movement of collections, updating inventory data and conducting future inventory work, and to defray higher computer costs. Recently developed bar code systems which utilize labels and optical scanning wands can be applied effectively for collections management purposes. Bar code labels applied to individual items or groups of items identify them in terms of type, location and quantity. The use of optical scanning wands permits this information to be entered directly into the computer, thus reducing the time-consuming and repetitive manual tasks now required to maintain collections inventories. In addition, for many collections, photographic records will be established to assist with the identification of objects, reinforcing the written descriptions required for accurate object identification. Additional on-line terminals also will be acquired to permit direct entry of changes in location codes and other critical collections management data.

Since 1978, the Institution has been collecting vast amounts of information on its collections and storing resulting data in automated computer systems. As the quantity of information grows, the cost of storing and maintaining the data files, and costs associated with developing format and retrieval programs, have increased. For the last several years, NMNH and NMAH have found it necessary to defer some inventory activities to meet these growing computer costs. Combined computer usage costs for these two museums amounted to \$170,000 in FY 1985 (\$100,000 for the Museum of Natural History/Museum of Man and \$70,000 for the Museum of American History). These higher costs have reduced resources available for work where inventory technicians are absolutely essential for maintenance, reconciliation and refinement of inventory information.

MUSEUM SUPPORT CENTER

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	40	5,002	-	-	-	269	-	-	-	-
FY 1985 Base	35	4,751	-	-	-	315	-	-	-	-
FY 1986 Estimate	39	5,060	-	-	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	35	4	39
11 Personnel Compensation.....	890	146	1,036
12 Personnel Benefits.....	87	14	101
21 Travel.....	12	-	12
23 Rent, Communications & Utilities....	2	-	2
24 Printing & Reproduction.....	1	-	1
25 Other Services.....	218	46	264
26 Supplies & Materials.....	283	36	319
31 Equipment.....	3,258	67	3,325
Total	<u>4,751</u>	<u>309</u>	<u>5,060</u>

Analysis of Increase

Necessary Pay.....	22
Inflation.....	11
Restoration of FY 1985 2% Reduction....	97
Program Funds.....	179

ABSTRACT - The budget request for FY 1986 consists of the administrative and building management functions of the Museum Support Center (MSC), the activities associated with preparing collections for the move and their transport, and the storage equipment for the collection storage pods of the Center. Funding for Smithsonian units which will operate in the MSC or provide services for the Center is contained in the appropriate sections of this budget document. These units are: the Conservation Analytical Laboratory, the National Museum of American History, the Smithsonian Institution Libraries, the Office of Protection Services, the Office of Plant Services, the Office of Printing and Photographic Services and the Office of Horticulture.

For FY 1986, a total of \$5.1 million is requested to support the following: the purchase of storage system component parts such as shelves, drawers, and doors (\$3.325

million); costs for preparing collections for the move and transporting them to the MSC (\$750,000); and MSC administrative and building management services (\$985,000). The requested funding is essential to continue the planned development and use of the MSC as a major Institutional resource for the care and preservation of National Collections and for research programs associated with those collections. This request includes increases of \$30,000 for the MSC move and 4 workyears and \$149,000 for the administration and building management services. Necessary pay of \$22,000 is required for existing staff and an amount of \$11,000 is sought to compensate for the effects of inflation in non-salary areas of expense. A further amount of \$97,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Museum Support Center (MSC) provides a total of 251,000 net assignable square feet of which 146,000 are for storage of museum collections and 105,000 for laboratory, work area, conservation training and building maintenance and protection services. Several individual bureaus and units of the Institution will make use of the Center. The National Museum of Natural History (NMNH) will utilize the largest amount of both laboratory and storage space in the Center. Space also has been assigned to the National Museum of American History (NMAH), and the Conservation Analytical Laboratory (CAL) which occupies a substantial share of the laboratory wing for its conservation treatment, scientific analysis and training functions. The laboratory wing is now in operation.

Building construction at MSC has been completed with minor exceptions. Storage equipment has been installed in portions of Pod 3, that part of the building specifically designed for "wet" collections (those stored in alcohol) and the relocation of those collections, identified as part of the initial move of collections to MSC, was begun in December 1984. A substantial amount of preparation and packing of other collections to be relocated from The Mall also has occurred. These initial-move collections will be placed in storage equipment for which a contract has been awarded and will occupy 61 percent of available storage space at MSC; the remaining 39 percent is designated for NMNH collections growth and other critical storage needs of the Institution.

Resources sought in this request will complete the staffing requirements for the administration and facility maintenance functions of the MSC. The following sections address the FY 1986 request for MSC equipment, the move of the collections and the remaining administration and maintenance requirements.

MUSEUM SUPPORT CENTER STORAGE EQUIPMENT - For FY 1986, a sum of \$3.3 million, the same amount as appropriated in FY 1985, is sought to continue the purchase of storage equipment at the Museum Support Center (MSC).

At the MSC, museum collections' storage space is provided in four discrete sections or pods of the building, each containing approximately 36,500 square feet of floor area and having a ceiling height of 26 feet. Ultimately, over seven-eighths of the storage area will be occupied by a "high density" storage equipment system that will accommodate collections on three eight-foot high storage levels, similar to multi-story library stacks. The system uses fixed self-supporting metal racks to hold a variety of shelves, drawers and doors as needed to meet the specific collections requirements. The Institution has worked in conjunction with the General Services Administration (GSA) and an architectural/engineering team in planning and contracting activities for the acquisition and installation of the system.

Approximately one-eighth of the available storage area (one-half of one pod) will be occupied by a different storage system designed to receive unusually large items such as whale skulls and totem poles. This "high-bay" storage equipment is similar to that used by the Institution in other storage locations.

Cost projections for the high-density storage equipment needed for the initial move were based on data provided by consultant engineers retained by GSA and totaled \$11.6 million to be funded in increments over five years from FY 1981 through FY 1985. For the high-bay storage equipment, the Smithsonian initially estimated \$425,000 on the recommendation of consultant engineers. It is now known that costs for the entire storage system were underestimated.

The revised cost of the high-density system for the initial move is \$21.8 million. This price is based upon low bids received following GSA solicitation procedures, adjusted costs for architectural/engineering fees, project management costs, contingencies and escalation factors for unit priced items such as shelves, drawers and doors. Although the design of the storage equipment for "wet" collections in Pod 3 could be implemented quickly because of its uniform shelving plan, design of the remaining three-tiered system for the "dry" collections in Pods 1, 2 and 4 is far more complex than originally anticipated. To meet the needs of specific collections, the three-tiered system for the "dry" collections requires the systematic placement of approximately 85,000 individual storage components of varying sizes and capacities.

The revised estimate for the "high-bay" storage equipment has increased to \$1.5 million because of unanticipated additions such as expanded air distribution systems, sprinkler and other protective systems and special high-lift equipment.

From FY 1981 through FY 1985, the Institution has received a total of \$13.8 million in appropriated funds (\$13.3 million for the high-density system and \$.5 million for the high-bay system) for the storage equipment required for the MSC initial move. The Institution also has reprogrammed \$1.4 million from other appropriated funds, producing a total of \$15.2 million. The projected total cost of the storage components needed for the initial move of collections that will occupy 61 percent of the MSC storage space is \$23.3 million.

With a portion of the funds appropriated through FY 1984, the structural framework and shelves for "wet" collections in Pod 3 were installed. This work was completed in December 1984, and the process of moving the "wet" collections was begun immediately. Also, with funds appropriated through FY 1984, contracts were awarded by GSA for installation of the structural framework only of the storage system for the "dry" collections in Pods 1, 2 and 4. To complete the storage system, a variety of storage components (shelves, drawers and doors) in which to place the collections must be acquired. Work planned in FY 1985 includes procurement of a portion of these storage components so that a sufficient number of them are available to receive the collections scheduled to be moved when the framework is complete.

The amount of \$3.3 million sought for FY 1986 will cover costs for the minimum quantities of shelves, drawers and other storage components necessary to insure the move of the collections through the end of the year. It must be emphasized that this amount will not provide all the storage components needed to accommodate all collections included in the initial-move plan. The Institution expects to request an amount of \$6.1 million in FY 1987 to complete the purchase of the equipment needed for the initial move including the "high-bay" equipment (\$4.8 million) and to start planning for the remaining 39 percent of the storage space at the MSC (\$1.3 million).

The proposed program for acquisition of storage components in FY 1985, FY 1986 and FY 1987 is closely coordinated with projected move schedules. Without these components, the storage system at the MSC will be incomplete and it will therefore be impossible to transfer the collections as planned. Deferred acquisition of the components will produce several adverse conditions affecting the MSC, The Mall museums and planned research activities. Collections now being processed and temporarily held in staging areas are inaccessible to scholars for research and study and, at the same time, the need to use

exhibit galleries for staging space prevents their use for informational public programs. In addition, the unit prices established by contract for the storage components will increase by a cost escalation factor if procurement is delayed; these prices will become invalid on September 30, 1987. Delay also will prolong the period over which the move can take place, resulting in increased moving costs as well as further disruptions to ongoing activities in the affected museums and at the MSC.

MOVE OF THE COLLECTIONS TO THE MUSEUM SUPPORT CENTER - For FY 1986, a sum of \$750,000, an increase of \$30,000 over the FY 1985 base, is sought for the move of the collections from the National Museum of Natural History (NMNH) and the National Museum of American History (NMAH) to the Museum Support Center (MSC). This move is unprecedented in the museum community in terms of volume, characteristics and variety of the collections and the distance of the move; NMNH alone will send millions of objects and specimens to the Center. The entire transfer of the collections will occur over a period of several years, with portions being moved only when appropriate storage equipment at the MSC has been installed.

To prepare for the move to the MSC, the Institution has sought the advice of moving specialists and museological sources to establish the most effective and safest methods for transporting the collections. Using the information obtained, a variety of specific techniques keyed to the characteristics of the collections were selected for critical activities such as packaging, placing of objects on pallets and transporting objects. Using the principles and techniques of the "Critical Path Method" (CPM) for project planning, a detailed schedule for each phase of the move was completed in January 1983. All information regarding this complex schedule has been automated.

Funds totaling approximately \$2.6 million were appropriated in FY 1983, FY 1984 and FY 1985 to prepare the collections for relocation and to perform other essential work prior to the move. Beginning in FY 1983, temporary personnel were employed to clean and stabilize objects and specimens, and pack and move them within the museums to staging areas. Some objects require conservation treatment before they can be relocated, and all items are handled with great care under constant supervision. Additionally, supplies of packing material and moving equipment, including three motor vans, were acquired. The vans are equipped with air-ride suspensions and environmental systems necessary to the safety of the collections in transit.

In the summer of 1983, work began at several locations to prepare "wet" collections (those stored in alcohol) for relocation to Pod 3, which was specially designed to receive them. While this preparatory work was in progress, storage equipment was being installed under a GSA contract. In December 1984, the GSA, on behalf of the Institution, accepted this equipment from the contractor and the process of transferring the "wet" collections from Mall locations to the Center was begun. The CPM move schedule calls for the Pod 3 move to be completed in June 1986.

Keeping with the CPM schedule, preparation of "dry" collections to be stored in Pods 1, 2 and 4 is under way. Beginning with the collections of the Department of Anthropology of NMNH, two of the exhibit halls in the NMNH have been closed to the public and converted into staging areas to accommodate processing of more than 9,000 Southwestern Native American pottery items removed from the attic of the Museum. In other areas of the Museum, approximately 800 ethnological objects, including 300 oversized items, have been readied for transport, and large numbers of northeastern North America archaeological objects already have been moved to the MSC Anthropology Processing Laboratory where they will be held until the storage equipment is installed in Pod 1. Work on the rest of the Anthropology collections will proceed according to the CPM schedule and relocation can begin as soon as the necessary storage equipment is available. It is expected that the transfer of these collections to MSC will require a period of at least three years.

Other collections are planned to be moved in calendar year 1986 following storage system framework installation and delivery of a portion of manufactured storage components. Most of these moves are scheduled to be completed in calendar years 1986 and 1987, with the relocation of NMAH's collections ending in calendar year 1988.

An amount of \$750,000 (an increase of \$30,000) is sought in FY 1986 to meet costs associated with continuing the process of preparing collections for the move and with their transfer to the Center. The additional funds are necessary for the temporary work force engaged in cleaning, stabilizing and packaging collections.

MSC ADMINISTRATION AND FACILITIES MANAGEMENT - For FY 1986, an increase of 4 workyears and \$149,000 over the FY 1985 base is sought to complete staffing requirements for the full operation of the administrative and facility maintenance functions of the MSC. The Office of the Director of the MSC is responsible for administrative coordination of the activities of user and support units and for oversight of building management functions at the Center. This Office administers the automated data processing center used for registrarial and collections management activities and for research and informational purposes required by the occupants. The Office also enforces the procedures established to control and account for the flow of collections into and out of the Center and to insure the safety of the collections against pest infestations and other hazards.

Under the general supervision of the Office of the MSC's Director, the Facilities Manager is responsible for providing shipping and receiving services, moving equipment and objects, and cleaning and maintaining the laboratory, collections processing and storage areas of the Center. Cleanliness of the facility at all times is a basic requirement for its successful operation.

For the full operation of the administrative and facility maintenance functions of the MSC, 4 additional positions and \$149,000 are requested for a total base of 39 workyears and \$985,000 in FY 1986. One ADP specialist (1 workyear and \$25,000) is sought for the Office of the Director of the MSC, to assist with the operations of the automated data system used for inventory control and information management related to the collections moving into and stored at the MSC. A further sum of \$42,000 is requested for supplies and service contracts for maintenance of the system. This system will provide essential information to the curators and scientists who will be spending increasingly more time doing research at the Support Center as collections are relocated there. The Office of Facilities Manager for the Center requires an additional three positions (3 workyears and \$53,000) to provide full janitorial and labor services for all areas of the building, including the laboratories, and \$29,000 to maintain adequate levels of supplies and contract services as additional collections are stored there.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An allotment of \$750,000 was provided to purchase special equipment at the Museum Support Center. Approximately \$435,000 was spent through FY 1984 with the balance of \$315,000 to be spent in FY 1985.



ADMINISTRATION

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds		Funds	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	245	11,515	167	7,841	-	91	-	119	-	-
FY 1985 Base	241	11,385	170	7,805	-	542	1	511	-	-
FY 1986 Estimate	244	12,285	172	8,068	-	540	1	612	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	241	3	244
11 Personnel Compensation.....	7,478	32	7,510
12 Personnel Benefits.....	1,483	10	1,493
13 Benefits for Former Employees.....	-	400	400
21 Travel.....	66	2	68
22 Transportation of Things.....	5	-	5
23 Rent, Communications & Utilities....	209	12	221
24 Printing & Reproduction.....	32	-	32
25 Other Services.....	886	58	944
26 Supplies & Materials.....	797	109	906
31 Equipment.....	429	277	706
Total	<u>11,385</u>	<u>900</u>	<u>12,285</u>

Analysis of Increase

Necessary Pay.....	264
Inflation.....	96
Restoration of FY 1985 2% Reduction....	223
Unemployment Compensation.....	400
Grade Target Reduction.....	-373
Program Funds.....	290

ABSTRACT - Administration includes central management, planning, oversight and review provided by the Offices of the Secretary, Under Secretary, Assistant Secretary for Administration, General Counsel and Treasurer. It also covers a wide range of specialized administrative and technical offices. Included among these are Accounting and Financial Services, Audits, Business Management, Congressional Liaison, Contracts, Equal Opportunity, Facilities Services (responsible for Design and Construction, Plant Services and Protection Services, all separately justified), and Grants and Risk Management. Other offices comprising this grouping include Information Resource

Management, Management Analysis, Personnel Administration, Printing and Photographic Services, Programming and Budget, Special Events, Supply Services and Travel Services. The funding for the Workers' Compensation account is included here. These organization units receive both appropriated funds and nonappropriated unrestricted Trust funds for their operating support in approximate balance to the overall funding of the Institution. Some offices, however, such as Business Management, Contracts, and Grants and Risk Management are funded entirely with Trust funds reflecting the nature of their work.

For FY 1986, an increase of 3 workyears and \$290,000 is requested of which 1 workyear and \$20,000 is related to personnel management services for the Quadrangle. The balance of 2 workyears and \$270,000 is for support of financial, personnel, information and photographic functions. Necessary pay of \$264,000 is required for existing staff and an amount of \$96,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$223,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985. An amount of \$400,000 for unemployment compensation is included in this line item as is a reduction of \$373,000 reflecting the anticipated savings from the Office of Management and Budget requirement to reduce the number of employees in grades 11 through 15. These latter two items are discussed in the Uncontrollables Section of this budget.

PROGRAM - Within this activity grouping, the Office of the Secretary with the assistance of the Office of the Under Secretary is responsible for management and administration, including policy determination, program planning, legislation, and the direction and review of performance of activities. The Office of the Assistant Secretary for Administration, including the Director of Facilities Services, is responsible for administrative and technical services and for design, construction, building operation and maintenance, and protection services. The Office of Audits, which reports to the Under Secretary and to the Audit and Review Committee of the Board of Regents, is responsible for performing all internal auditing and the external audit program of the Smithsonian. The internal audit function includes auditing Federal programs as well as Trust-funded activities on a recurring basis. The external audit function involves the audit of documentation in support of claims, cost proposals, and cost and pricing data arising from contracts, grants and other financial agreements.

The Office of the General Counsel provides counseling to the Smithsonian Board of Regents, the Secretary, and the other executive and program offices on legal matters involved in Smithsonian administration; coordinates and oversees the conduct of litigation and other adversary proceedings to which the Institution is a party; reviews administrative claims arising out of Smithsonian operations; and generally monitors all aspects of Smithsonian operations for legal implications.

The Office of the Treasurer has responsibility for financial management. This includes the direction of financial planning, accounting, payroll, financial reporting, administration of grants and insurance, risk management, handling of bank relations, oversight of investments and management of certain auxiliary activities. Components of the Office of the Treasurer include: Accounting and Financial Services, Grants and Risk Management and various Business Management Offices, including Museum Shops, Mail Order, Product Licensing, Concessions and Parking operations.

The Offices of Congressional Liaison and Special Events are responsible respectively for providing information about the Smithsonian to Congress and developing and overseeing legislation pertaining to the Institution and for coordinating special events associated with exhibit openings, lectures and other presentations.

The Contracts Office assists in obtaining Federal grants and contracts for special programs and projects and negotiates certain specialized contracts related to Trust-funded operations.

The Office of Equal Opportunity plans, coordinates and monitors a positive action program to provide equality in employment practices and program activities. Major efforts include the setting of goals and monitoring action to correct underrepresentation in employment of minorities, women, and the disabled; assessing program and facility access for disabled persons; providing employee counseling and complaints resolution; developing and overseeing upward mobility, Hispanic and women's programs; and meeting community and national outreach responsibilities through exhibits and other information on the Institution.

The Office of Information Resource Management (OIRM), encompasses a number of planning, management and automation functions. OIRM planning is directed toward improving access to and use of the information resources of the Institution--its cultural objects, scientific specimens, books and manuscripts, and its administrative information concerning personnel, funds and other resources. Planning is based on program needs of bureaus and offices defined by those organizations under the technical leadership of OIRM staff. OIRM plans and develops the cost effective use of technology to support defined program needs and emphasizes the management of data. OIRM's automation functions involve technology assessment to ensure that the Smithsonian uses the most appropriate technology from the market place and systems analysis, computer programming and computer operations involved in the development and use of computer systems.

The Management Analysis Office provides a wide range of staff assistance and advisory services in support of Smithsonian administrative operations. The Office performs studies of organization, systems and procedures; prepares and distributes management issuances containing policy and instructions governing operations; and conducts the Institution's forms management program.

The Office of Personnel Administration provides personnel services, advice and assistance to managers and employees of the Institution. Within the laws, rules and regulations of relevant controlling agencies and within the policies of the Institution, the Office is responsible for recruitment, staffing, position classification and wage administration, performance appraisal and merit pay, employee relations, union-management relations, employee benefits (retirement, workers compensation, unemployment insurance, health insurance, life insurance, annual and sick leave, and travel insurance), records and data maintenance and processing, personnel policy development, and personnel program evaluation.

The Office of Printing and Photographic Services is the central office for technical advice, guidance and production on photography and duplicating services to curatorial, scientific, technical and administrative staff. Photographic services include studio and onsite photography, photography of related field work, photographic copy restoration, printing, preservation of originals under archival conditions, the development and maintenance of an automated catalogue of photographs and sales of materials to the public.

The Office of Programming and Budget formulates the consolidated Federal and nonappropriated Trust fund budgets for review and approval by the Secretary and the Board of Regents. Approved budgets are developed for submission to the Office of Management and Budget (OMB) and to Congress, and the Office serves as liaison with OMB and Congress on budgetary matters. Appropriated and nonappropriated Trust fund budgets are monitored to help assure that program needs are met, budgetary goals are achieved and that accountability is maintained. The Office participates in the development of the Five-Year Prospectus, advises management on matters pertaining to program planning and development, and incorporates financial information in central data bases for use in management reports, budgetary planning and special analyses.

The Office of Supply Services is responsible for the policy, planning and coordination of the procurement, contracting, property management and supply program. The Office procures supplies, materials, contractual services including construction, and equipment for research, curatorial, conservation, exhibit preparation, administrative and other Smithsonian activities. Programs for business with small, minority and women-owned firms are set and monitored. The Office also maintains all property records and performs and oversees the regular equipment inventories and boards of surveys to ensure proper accountability, utilization and security.

The Travel Services Office plans itineraries and makes arrangements for travel to be accomplished efficiently and economically with particular attention to saving funds by the use of contract and discount fares. Information is gathered and made available to staff on accommodations, car rentals and other services. In coordination with the accounting and management analysis offices, policy and procedural materials on travel are prepared for staff use.

Progress in Administrative Support - Major emphasis over the past year and continuing for the current and future budget years includes the development of the Quadrangle project, the supervision of the administrative and support activities to assure their responsiveness to needs, and strengthening of the Institution's equal opportunity and affirmative action programs. Continued attention is being given to legal oversight of and counseling on the Smithsonian's programs and improvement of financial management, accounting, monitoring, reporting and auditing systems to assure control and accountability as a public responsibility. A number of specific developments merit reporting in the areas of personnel, financial and procurement management, equal opportunity, management information systems, public information and photographic services.

Improvements in the administration of the unemployment insurance program continue to be made with savings beginning to be shown. Special efforts have been directed toward strengthening the employee benefits program with the consolidation of these functions from three separate offices into one. Continued efforts were directed at implementing the new Performance Management Review System. The number of Accounting Service Units has been increased. Located in various Smithsonian facilities and linked by computer terminal to the central Accounting Office, these units expedite processing of accounting documents, thereby enabling more timely payments to vendors and better cash management. Computer techniques have been extended to the management of the current funds investments and a new query system has become operational to give up-to-date information on the status of financial accounts. Completion of the implementation of the new Federal Acquisition Regulations was an important accomplishment of the Office of Supply Services.

Equal opportunity efforts are having success with improvements in representation of minority persons and women in professional and administration jobs and in the upper grades. There has been steady improvement in program and facility accessibility for disabled persons. Greatly expanded opportunities for training and career development are available for minority students and scholars. The Smithsonian has developed working relationships with Washington, D.C. universities and with the historically black colleges and universities. Under the auspices of the Office of Fellowships and Grants, many internship appointments and faculty fellowships are being made primarily from these schools. The Office of Elementary and Secondary Education's new Career Awareness Program for high school students has been met with great enthusiasm by the District of Columbia Public Schools. In addition, there have been special actions to provide information, assistance and exhibits to minority and women's groups and organizations. Goals for procurement from small and minority businesses were exceeded.

The Office of Information Resource Management was structured during FY 1985 to emphasize further policy and planning and to identify responsibilities for data administration, documentation standards, security and other information system management control functions. A program for planning and budgeting automatic data processing resources with bureaus and assignment of staff specialists to quality control and data administration reflects a continuing effort to ensure the cost-effective implementation of Institutional priorities in future developments.

The first of the major information systems funded by Congress in FY 1983 and FY 1984, the Smithsonian Institution Bibliographic Information System, provides on-line access to the catalogues of the Smithsonian Institution Libraries and the ten major archives (including film, photographic, sound and textual collections). Researchers are beginning to use the system to record information about reprint collections and other bibliographic information bases (such as conservation technical reports and scholarly abstracting/indexing projects). Planning for an Institution-wide local area communications network has been completed; installation will begin in FY 1986.

The Institution has acquired substantially enhanced central processing equipment using Trust funds in the extension of its present computer cost centers. Software utilizing these processors for the Collections Information System is being procured competitively and will be installed in FY 1985. As a result of funding cuts in the FY 1985 Federal budget, acquisition of software to support implementation of Institution-wide improvements in management information systems, initially scheduled for FY 1985, has been delayed until FY 1986. An information center which provides user training and assistance in selecting the most effective modern software systems, implemented in FY 1985, has been a success and will be further expanded as a part of the overall strategy of the Office of Information Resource Management to reduce Institutional dependence on older in-house produced software in favor of commercially available systems.

In the Office of Printing and Photographic Services, the important effort to convert hazardous nitrate negatives to safety film continues with completion anticipated by the end of 1985. Major emphasis was placed on managing the inventory photography projects for the National Museum of American History. A video disc project was completed during FY 1984 and improvements to the cold storage room were made which will further ensure the preservation of the photographic collection.

EXPLANATION OF PROGRAM INCREASE - For FY 1986, an increase of 3 workyears and \$290,000 is requested of which 1 workyear and \$20,000 is related to personnel management services for the Quadrangle. The balance of 2 workyears and \$270,000 is for support of financial, personnel, information, and photographic functions.

Financial and Personnel Management (2 workyears and \$70,000) - For the Office of Programming and Budget (OPB), an increase of 1 workyear and \$30,000 is sought. In addition to carrying out its regular formulation and execution responsibilities, the Office has made important progress in the development of automated systems. The growing size and increasing complexity of Smithsonian programs during the past several years have resulted in greater requirements for the accumulation and presentation of resource data. Of the proposed new resources, 1 workyear and \$26,000 is needed primarily to design automated programs that will facilitate budgetary analysis and improve OPB's ability to furnish the Institution's management with timely studies of resource utilization. A further amount of \$4,000 is requested on a continuing basis for the purchase of software and for staff training.

The staffing and opening of the Quadrangle will add substantially to the workload of the Office of Personnel Administration. This new museum and public education center will require many new employees including professional staff as well as maintenance, custodial, and protection personnel, areas of traditionally high turnover. One workyear for

two personnel assistants on a half-year basis and \$20,000 are required to augment the present staff to assist with the full range of recruitment, placement, training, documentation and counseling functions and to avoid a deterioration of support for the bureaus and offices now being served. A further \$20,000 is required for a one-time purchase of four personal computers for general internal office automation and inter-office electronic communication for efficient flow of personnel information with bureaus with high volume personnel activities. These funds will be used in the following year to pay the full-year costs of the personnel assistants.

Development of Institution-wide Software Applications (\$200,000) - For FY 1986, an increase of \$200,000 is requested over the FY 1985 level of \$425,000 for the development of Institution-wide automation systems and software applications. In FY 1983, the Smithsonian initiated a program to develop new automation systems with the development of the Smithsonian Institution Bibliographic Information System (SIBIS). In FY 1984, the Bibliographic Information System was installed, planning for the development of a Collections Information System and preliminary planning was conducted for construction of a communication network between the Institution's buildings in Washington to house a Local Area Network (LAN) for the electronic transmittal of information. In FY 1985, the acquisition of software for the Collections Information System and the planning phase for the Local Area Network will be completed. With the requested level of \$625,000 for FY 1986, the Smithsonian will purchase and install workstations throughout the Institution dedicated to the bibliographic and collections information systems (\$200,000); acquire software to support the implementation of Institution-wide improvements in management information systems (\$225,000); and begin the implementation of the Local Area Network through the purchase and installation of coaxial cable and specialized software (\$200,000). (The actual construction of the tunnel connections (referred to as "raceways") between the buildings will be funded through the Institution's Restoration and Renovation budget request for FY 1986.)

The bibliographic and collections information systems provide on-line capability for cataloguing and tracking the museum and bibliographic research collections of the Smithsonian making information available throughout the Institution to support inventory, loan, conservation, exhibition and research programs; and to retrieve, analyze and present this information in response to individual requirements of a particular request. The purchase of workstations in FY 1986 and following years, to be located throughout the Institution, is required to provide the necessary equipment dedicated to these systems to enable all Smithsonian bureaus to use the systems. A sum of \$200,000 is requested for this purpose in FY 1986. The Office of Information Resource Management, which has responsibility for the administration of these Institution-wide systems, will take advantage of economies of scale in the procurement of this equipment and make these workstations available to specific bureaus as their access to the on-line systems is provided. (The funding requested for computer equipment in the line items of individual bureaus will be used for the purchase of specific types of computer equipment that are required primarily for their own applications, but that also will be compatible with the equipment purchased by OIRM through the development of telecommunications access to these Institution-wide systems.)

During FY 1986, the Smithsonian will acquire software for development of a third major automation system: a management information system to implement Institution-wide improvements in this area. With a sum of \$225,000 sought for FY 1986, software will be acquired to develop this system, based on the evaluation of the Smithsonian's requirements for management information conducted during the past two years.

The development of communications capabilities between computers throughout the Institution is an essential ingredient in the modernization of these automation systems. By providing access to common data bases--such as the bibliographic, collections information and management information systems--from computers located throughout the

buildings on The Mall and in Washington, the Local Area Network will support the transmittal of this information between these devices. The Local Area Network will consist of a network of coaxial cable equipped with switching and monitoring devices, which will permit the transmittal of electronic information (including images) at high speeds and with greater reliability than is possible using telephone lines. For FY 1986, a sum of \$200,000 is sought to commence installation of the Local Area Network. The installation of the Local Area Network and raceways will continue through 1989 with additional funding to be requested in the Restoration and Renovation and Salaries and Expenses accounts.

Photographic Services (1 workyear and \$20,000) - The Office of Printing and Photographic Services provides photographic support for inventory control, documentation of conservation treatments and instructional needs of the Museum Support Center. By FY 1986, the demand for photographic services will exceed the capability of the one photographer provided in FY 1984. The Department of Anthropology, which will be moving a large portion of its collection to the Center, needs to photograph high value and delicate items in the archaeology and ethnology collections. These objects number a quarter of a million items. Further, museum departments will photograph collections to be stored there so researchers can identify items to be studied without moving or disturbing objects unnecessarily. The additional photographer position (\$20,000) requested for FY 1986 will be necessary to meet the heavy photographic workload, which includes taking photographs and developing and printing them in the photographic laboratory.

#### NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funding of these centralized services from both appropriated and nonappropriated sources produces a ratio of Federal and Trust fund administrative support approximately in proportion to the operating program expenditures of the Institution as a whole. The amounts shown under Unrestricted General represents administrative expenditures for those units that are organizationally under Administration. Certain other units, receiving administrative allotments, are reflected in the appropriate section of the budget request. For example, administrative costs for the Smithsonian Astrophysical Observatory are reflected within its nonappropriated Trust funds section. Also included are expenditures for producing, distributing and marketing photographic material and slide sets, and funds to help defray the costs of the Office of Printing and Photographic Services. A program allotment is made to the Office of Equal Opportunity to support community outreach through exhibits and publications, specifically aimed at women and minorities. Funds also are provided for the costs of the development and implementation of the personnel/payroll system which is designed to provide a consolidated information base for a wide variety of personnel, budgetary and other financial data. Special Purpose funds include gifts received through unrestricted bequests which in accordance with the Bylaws of the Board of Regents subsequently are transferred to endowment. Anticipated expenditures in the Special Purpose category include support of studies in ornithology, computer conversion costs and small amounts used for legal seminars, research, furniture and property taxes.

Restricted Funds - Included in this category are endowment bequests and foundation grants for scientific research publications, Quadrangle Film Project and the Renwick Exhibition.

OFFICE OF DESIGN AND CONSTRUCTION

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General FTP**	Amount	Special Purpose FTP**	Amount	FTP**	Amount	FTP**	Amount
FY 1984 Actual	36	1,833	7	276	-	-	-	-	-	-
FY 1985 Base	35	2,044	9	354	-	-	-	-	-	-
FY 1986 Estimate	35	2,159	10	420	-	-	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	35	0	35
11 Personnel Compensation.....	1,451	34	1,485
12 Personnel Benefits.....	180	4	184
21 Travel.....	14	1	15
23 Rent, Communications & Utilities....	25	1	26
24 Printing & Reproduction.....	11	1	12
25 Other Services.....	310	51	361
26 Supplies & Materials.....	21	6	27
31 Equipment.....	32	17	49
Total	<u>2,044</u>	<u>115</u>	<u>2,159</u>

Analysis of Increase

Necessary Pay.....	38
Inflation.....	16
Restoration of FY 1985 2% Reduction....	41
Program Funds.....	20

ABSTRACT - The Office of Design and Construction (ODC) provides professional architectural and engineering services to the Institution in support of the development, operation, maintenance, repair and improvement of the physical plant. Services include short-and long-range planning and feasibility analyses, design and engineering analyses, project management and development of cost and budgetary estimates. Other services provided by ODC include contract review, preparation and supervision; general construction administration and management; interior design work and space utilization planning; and technical consulting support. For FY 1986, an increase of \$20,000 is requested to purchase automation equipment to enable the Office to more efficiently prepare and document technical and contractual data pertaining to construction projects. Necessary pay of \$38,000 is required for existing staff and an amount of \$16,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of



\$41,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The primary functions of the Office of Design and Construction are to provide planning, engineering, architectural and related administrative services for all construction, renovation and repair projects to Smithsonian facilities. These are located primarily in the Washington metropolitan area, as well as at the Smithsonian Environmental Research Center in Maryland, the Whipple Observatory in Arizona, the Cooper-Hewitt Museum in New York and the Tropical Research Institute in Panama. ODC's staff includes electrical, mechanical and structural engineers, architects and construction managers, architectural and engineering draftsmen, planner estimators, and administrative support personnel.

The major responsibility of the Office is to manage the Restoration and Renovation of Buildings (R&R) and construction programs by providing technical and professional support that addresses the facilities needs of the Institution in a cost effective manner. The Restoration and Renovation program is designed to bring an aging physical plant up to acceptable levels of safety for visitors and staff and to provide proper environmental conditions for the preservation and maintenance of the National collections.

Staff services provided by the Office include the development of facilities' master plans, preparation of detailed project designs and specifications in support of future year physical plant projects and related budget estimating. The Office conducts architectural and engineering studies of buildings' operating systems, recommends and oversees efforts to solve functional deficiencies, reviews designs prepared by the museums' exhibits staffs to ensure compliance with safety, health, accessibility and other technical standards, prepares, reviews and supervises architectural and engineering design contracts as well as construction contracts, and performs architectural and engineering feasibility studies and analyses. Expertise also is provided to Smithsonian managers on matters relating to planned construction and facility development or utilization. To support these functions, ODC maintains a central library for cataloguing, filing and identifying all plans, drawings and specifications related to Smithsonian buildings and properties.

In FY 1984, the Office of Design and Construction supervised 116 construction contracts. Among the most notable of these were: ongoing exterior renovations and repairs to the Arts and Industries Building including roof replacement, cleaning and pointing of the brick, refinishing of stone sills and installation of new energy efficient windows; and continued renovation of the facade at the Renwick Gallery including the replacement of all existing sandstone elements that have deteriorated from weathering and age with architectural precast stone replicas. Also notable is ongoing work to replace a portion of the roof of the American History building which will be completed in FY 1985, and continuing efforts to upgrade heating, ventilating and air-conditioning systems throughout the Institution's facilities, including a major upgrading begun in FY 1984 of the HVAC system in the American History building. HVAC improvements are scheduled in future years for all Smithsonian facilities. The program for the abatement and containment of asbestos in Smithsonian facilities continues with primary work being accomplished in facilities at Silver Hill, Maryland, and the American History, American Art and Portrait Gallery, and Arts and Industries buildings. Fire protection improvements are continuing throughout the Institution with efforts most recently accomplished at the National Museum of American History, the Arts and Industries Building, the National Museum of Natural History, the Freer Gallery of Art, the Renwick Gallery of Art, and the Smithsonian Building. A similar workload is scheduled in FY 1985 and in FY 1986.

EXPLANATION OF PROGRAM INCREASE:

For FY 1986, an increase of \$20,000 is requested for purchase of two small computers, software packages, and related supplies to enable ODC to more efficiently develop and prepare contract documents, construction status reports and related construction and facilities program financial data. ODC does not have base funding for automation. Presently, construction and contract information must be retrieved manually from office files and then entered into word processing equipment not specifically designed to handle this volume and type of work. The small computers will store and retrieve data, and display and produce this information in preset report or contract formats. This process will allow ODC to work more efficiently, and improve the Office's capability to accurately monitor and report the status of Smithsonian construction projects. In subsequent years, these monies will be used to purchase additional software, supplies and systems maintenance.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided by an allotment used primarily to cover salaries and some support costs (estimated expenditures of \$354,000 in FY 1985 and \$420,000 in FY 1986) reflecting the fact that ODC provides services for Trust-funded as well as federally-funded projects.

OFFICE OF PROTECTION SERVICES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS	
	FTE*	Amount	General		Special Purpose		Funds		& Contracts	
		FTP**	Amount	FTP**	Amount	FTP**	Amount	FTP**	Amount	
FY 1984 Actual	659	16,415	-	5	-	30	-	-	-	-
FY 1985 Base	677	17,296	-	7	-	24	-	-	-	-
FY 1986 Estimate	698	18,896	-	7	-	25	-	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	677	21	698
11 Personnel Compensation.....	12,186	1,711	13,897
12 Personnel Benefits.....	1,210	163	1,373
21 Travel.....	53	-	53
22 Transportation of Things.....	5	2	7
23 Rent, Communications & Utilities....	131	-	131
24 Printing & Reproduction.....	5	17	22
25 Other Services.....	2,640	-575	2,065
26 Supplies & Materials.....	196	146	342
31 Equipment.....	865	136	1,001
42 Insurance Claims & Indemnities.....	5	-	5
Total	<u>17,296</u>	<u>1,600</u>	<u>18,896</u>

Analysis of Increase

Necessary Pay.....	449
Inflation.....	125
Restoration of FY 1985 2% Reduction....	342
Program Funds.....	684

ABSTRACT - The Office of Protection Services (OPS) is responsible for the security, fire protection, safety, and health programs of the Smithsonian. For FY 1986, a total increase of 21 workyears and \$684,000 is requested. Additionally, OPS proposes to reapply a sum of \$700,000, available from proprietary security system monies, to meet other essential needs. These resources, totaling \$1,384,000 will be used for the following purposes: to compensate for a base shortage in salaries and benefits (\$669,000); to purchase essential security supplies, services and equipment (\$183,000); to strengthen the security at the Museum Support Center at Suitland, Maryland (9 workyears and \$224,000); and to provide security for the Quadrangle building and

grounds (12 workyears and \$308,000). Necessary pay of \$449,000 is required for existing staff and an amount of \$125,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$342,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985.

PROGRAM - The Office of Protection Services is responsible for security, fire protection, safety and health services for visitors and staff of the Smithsonian Institution. The authority of the Office to administer these programs derives from Public Law 82-206 and Public Law 88-391, which relate to the policing of Smithsonian buildings and grounds, and from Public Law 91-596 and Executive Order 12196, which relate to occupational safety and health.

The Office of Protection Services provides a full range of security services through the efforts of a security force and a professional and administrative staff that includes training specialists, safety specialists, industrial hygienists, fire protection engineers, alarm system specialists, investigators, and museum security specialists. The security force provides physical security 24 hours a day, every day of the year, at 13 major museums and art galleries in addition to other major work, research and storage facilities in the Washington metropolitan area, and at the Cooper-Hewitt Museum in New York City. The staff conducts in-depth studies of security needs, escorts shipments of valuable objects, formulates long-range plans for improved security and safety, operates a personnel security program, and installs and maintains alarms, including equipment for the new proprietary security system. The Office provides technical assistance and advisory services and administers occupational safety and health programs for the National Zoological Park, the Smithsonian Tropical Research Institute, the Smithsonian Environmental Research Center, and the Smithsonian Astrophysical Observatory. In all, the Office is responsible for the protection of more than 5,000 Smithsonian employees, millions of visitors each year, the many facilities of the Institution, and the National Collections.

The security force operates 24 hours a day, seven-days-a-week, to monitor conditions and activities in and around the buildings they protect, to enforce museum regulations, and to intervene in cases of crime, accident, or other emergency. Uniformed guards, plainclothes and K-9 officers are assigned in the galleries, on the grounds, and at entrances during the day and night. Coordinating their activities through the use of a radio network, security officers respond to alarm signals, conduct security and fire patrols after the museum buildings are closed to the public, investigate accidents, report fire and safety hazards, malfunctions of mechanical and electrical equipment, and provide information to museum visitors. Security coverage is based on the concept of posts--the areas for which security officers are responsible. A post may be one point (for example, a museum entrance) or an area whose boundaries are determined by such factors as its use; crowd conditions; the value of objects on display; the vulnerability of those objects to accidental damage, vandalism, or theft; the effective field of vision of the assigned protection personnel; and availability of electronic devices. The number of guards required to staff one post may vary from one (for a post staffed eight hours a day, five days a week) to five (for a post staffed 24 hours a day, seven days a week).

To provide adequate security coverage within current staffing limitations, the Office continues to provide selected services through the use of contracts. For example, the contract for operation of checkrooms in Mall museums and elevators, previously staffed by guards, has been continued in FY 1985 as well as the contract for guard services at the Cooper-Hewitt Museum in New York City.

A key part of the Institution's security program involves the conversion to an electronic security and fire alarm system completely owned and operated by the Smithsonian. Plans call for conversion to be completed in FY 1987, at a total cost of approximately \$7 million. The purposes of converting to a proprietary security system are to gain faster response time to security and fire protection alarms; to improve the quality and control of information transmitted from the security devices and fire sensors to the building security offices and the central control room; to manage and control systems maintenance; and to eliminate reliance on leased equipment, outside sources of power and related contractual services. The fire detection and security sensors that are elements of this system will be linked to eight local control rooms and to a central room that monitors all alarm activity and provides emergency back-up capability. Computer-controlled closed-circuit television will allow the control room operator to quickly assess problem situations and dispatch patrolling guards to the area of the activated sensor for appropriate action.

Fire and safety programs include training in preventive techniques; reviews of construction, renovation, and exhibit installation drawings; regular fire inspections of facilities; and annual safety and industrial hygiene inspections. These measures have resulted in the development of long-range plans for installation of new and upgraded fire detection and suppression systems and for compliance with safety regulations. Fire safety presentations are made to approximately 80 percent of the Smithsonian staff each year. A safety staff works to eliminate hazards and accidents and occupational illnesses. Locations in which asbestos has been discovered are monitored carefully by industrial hygienists, and projects to remove or contain asbestos and to clean areas and objects found to be contaminated are proceeding on schedule. The effort to eliminate the dangers of cellulose nitrate film in the Institution's collections also is well under way. Employees are provided safety shoes, safety glasses and other equipment as necessary. The safety staff continues to promote safety awareness among employees by coordinating the work of safety committees in every facility, by offering several training programs, and by publishing a safety newsletter for all employees.

Medical services for employees exposed to health hazards on the job or experiencing other job-related health problems are under the direction of a staff medical officer. The health services staff, in addition to providing first aid for on-the-job injuries to employees, continues to develop and implement effective monitoring programs for employees exposed to hazardous conditions, write medical standards for employees appointed to certain positions, and develop a program of pre-employment physical examinations. Programs to counsel employees troubled by alcoholism, drug, or emotional problems are continuing as are programs to provide immunizations for employees traveling on official business, diagnostic tests for chronic illnesses, and certain treatments ordered by employees' private physicians. Health units are staffed so that qualified medical personnel are available to administer first aid when museums are open to the public.

#### EXPLANATION OF PROGRAM INCREASE:

For FY 1986, a total increase of 21 workyears and \$684,000 is requested. Additionally, OPS proposes to reapply a sum of \$700,000, available from proprietary security system monies, to meet other essential needs. These resources, totaling \$1,384,000 will be used for the following purposes: to compensate for a base shortage in salaries and benefits (\$669,000); to purchase essential security supplies, services and equipment (\$183,000); to strengthen the security at the Museum Support Center at Suitland, Maryland (9 workyears and \$224,000); and to provide security for the Quadrangle building and grounds (12 workyears and \$308,000). Plans call for installation of the proprietary security system to be completed in FY 1987 with resources totaling \$1,155,000 in fiscal years 1986 and 1987, consisting of \$440,000 each year in base funds remaining available within the Office's Salaries and Expenses account in addition to \$275,000 allocated for this program from the Restoration and Renovation of Buildings (R&R) account in FY 1986.

Salaries and Benefits Base Shortage (\$669,000) - For FY 1986, an increase of \$669,000 is requested to alleviate a base shortage in salaries and benefits costs of existing staff. The Office's base shortage has evolved over a period of seven years and has three causes: the FY 1982 across-the-board reduction to the Interior and Related Agencies Appropriations Act; a position upgrading program instituted by OPS in FY 1979 which upgraded existing guard positions from GS-4 to GS-5; and the necessary diversion of resources to health and safety programs. This funding shortage has necessitated deferrals in the filling of guard vacancies, causing the selected closing of exhibition galleries and reprogramming of monies from other approved programs. The sum of \$669,000 sought for FY 1986 will provide full funding for OPS' approved staffing of 541 guards, and eliminate the need to cover the security deficit through reductions in the protection program and the diversion of resources from other bureaus of the Institution.

Supplies, Services and Equipment (\$183,000) - For FY 1986, an increase of \$183,000 is requested to purchase services, supplies and equipment essential to allow the additional uniformed guards approved in FY 1984 and FY 1985 to perform day to day security functions (\$98,000) and to cover the costs of laboratory testing for asbestos and other hazardous substances (\$85,000).

In FY 1984 and FY 1985, Congress added 65 additional guard positions over and above the Institution's budget request. Necessary support costs are needed for these additional positions. For each new guard hired, there are associated support costs for uniform purchases, laundry, dry cleaning, replacement of uniforms and for the purchase, maintenance and replacement of equipment such as two-way radios, whistles and badges. Portable two-way radios are essential to allow guards to remain in constant contact with central security control room operators while on duty at security posts, and are a vital link in the overall security program. The average cost per guard for these essential supplies, services and equipment is \$1,500. Therefore, an amount of \$98,000 is requested to cover these essential support costs for the 65 additional positions provided.

Testing for asbestos and other hazardous substances in Smithsonian facilities has increased dramatically in recent years as an awareness has developed of the dangers to employees who must work in areas containing these materials. An additional sum of \$85,000 will allow the Office to obtain services from an independent laboratory including testing of substances suspected to be detrimental to the health of Smithsonian employees.

Museum Support Center Security (9 workyears and \$224,000) - The Office of Protection Services provides internal and external security for the Museum Support Center (MSC), at Suitland, Maryland, on a 24 hour a day year-round basis in addition to providing health services for personnel at both the MSC and Suitland facilities. A carefully coordinated security program combining staffed guard posts, roving canine teams and automated electronic surveillance devices has been developed to achieve the high level of security required for the MSC which will house a significant portion of the National Collections. The MSC will be in full operation in FY 1986, and a total security force of 42 full-time permanent positions is required to provide this facility and grounds with adequate levels of security coverage. These positions include 29 guards and four supervisors to staff the guard posts throughout the building, five canine teams for perimeter security, one ADP specialist to oversee operations and to prepare and maintain control programs for the central electronic security console and related components, two alarm technicians to maintain security devices throughout the building, and one nurse to staff the health station. In FY 1983, 16 of the required positions were provided by the Congress and 17 additional positions were provided in FY 1984. To complete this essential staffing structure, the remaining nine positions and \$224,000 are sought in FY 1986 for the salaries of these positions (\$181,000) and related support costs (\$43,000). Specifically, these include six guards, two canine officers, and one alarms technician.

The requested guard and canine officer positions will provide the number of personnel needed to staff 14 posts inside and outside the building throughout the day, at night, and on weekends, and allow for continuous patrols of the lengthy perimeter areas by canine teams during evening hours and on weekends. On weekends, the security gates to the MSC grounds will be locked and canine teams will have the responsibility of responding to requests for entry by authorized personnel. The electronic security system contains hundreds of devices including motion and audio-detectors, electronic locks, closed-circuit television, card reading devices and intercoms. The second alarms technician requested will assure that security devices are operating properly at all times and that the integrity of the system is not compromised by equipment failure. This system has been designated as a prototype which will be expanded during the next several years to all Smithsonian museums in the Washington metropolitan area.

Quadrangle Security (12 workyears and \$308,000) - An increase of 12 workyears and \$308,000 is sought in FY 1986 to establish a security unit for the new Quadrangle building and grounds. Of this amount, 12 workyears and \$233,000 are sought to fund the part-year salary and benefits costs of 33 security guards including supervisory personnel. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) The Quadrangle is scheduled for beneficial occupancy in early 1986, by which time the security staff must be on board and fully trained. These positions are essential to provide security coverage for the visitors, staff, collections stored and displayed within the Quadrangle, and exterior building and grounds. The initial complement of security personnel will staff entrances, control access to sensitive areas, and patrol the surrounding grounds. A further sum of \$75,000 is requested for basic security supplies, uniforms, and equipment needed by the staff, to carry out day-to-day security functions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These are provided by an allotment and from reimbursements for the use of guard services at special events and for lectures at Smithsonian facilities, and are used for the purchase of supplies, materials and equipment.

OFFICE OF PLANT SERVICES

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS										
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		FEDERAL GRANTS & CONTRACTS		
	FTE*	Amount	General		Special Purpose		FTE**	Amount	FTE**	Amount	
			Amount	FTP**	Amount	FTP**	Amount				Amount
FY 1984 Actual	420	29,345	5	841	1	10	-	10	-	-	-
FY 1985 Base	443	29,913	6	1,034	1	7	-	1	-	-	-
FY 1986 Estimate	464	34,099	6	1,102	1	5	-	1	-	-	-

\* FTE = Full-time equivalent

\*\*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1985	Proposed Adjustments	Est. FY 1986
FTE Allocation.....	443	21	464
11 Personnel Compensation.....	10,820	1,020	11,840
12 Personnel Benefits.....	1,365	91	1,456
21 Travel.....	22	3	25
22 Transportation of Things.....	2	0	2
23 Rent, Communications & Utilities....	15,432	2,236	17,668
24 Printing & Reproduction.....	13	0	13
25 Other Services.....	1,340	95	1,435
26 Supplies & Materials.....	638	712	1,350
31 Equipment.....	281	29	310
Total	29,913	4,186	34,099

Analysis of Increase

Necessary Pay.....	360
Inflation.....	87
Restoration of FY 1985 2% Reduction....	602
Program Funds.....	1,216
Utilities and Rent.....	1,921

ABSTRACT - The Office of Plant Services (OPlantS) operates, maintains, and repairs 14 museums and art gallery buildings (including the Quadrangle, now under construction), and a number of other work and collections storage areas located in the Washington metropolitan area and in New York City. OPlantS provides utilities, transportation, mail and telephone services in support of research, exhibit, education and other public programs. In addition, technical services and assistance are provided to other Smithsonian units located outside the Washington metropolitan area including the Tropical Research Institute in Panama, the Cooper-Hewitt Museum in New York, the Whipple Observatory in Arizona and the Environmental Research Center in Maryland. Also included in this line item are the Office of Horticulture, South Group Buildings Management and the Quadrangle Building Management unit.



For FY 1986, a total increase of 21 workyears and \$1,216,000 is requested. Of this amount, \$650,000 is sought to provide sufficient base funds (\$566,000 for supplies and \$84,000 for salaries) to enable OPlantS to carry out its preventive maintenance and repair responsibilities and 21 workyears and \$566,000 is required to establish repair and maintenance service capabilities in the new Quadrangle facilities.

Necessary pay of \$360,000 is required for existing staff and an amount of \$87,000 is sought to compensate for the effects of inflation in nonsalary areas of expense. A further amount of \$602,000 is requested to restore funds eliminated from this line item as a result of the two percent across-the-board reduction in FY 1985. An amount of \$1,921,000 for utilities, postage, rent, and communications is being requested and justified in the uncontrollables section of this budget.

PROGRAM - I. Office of Plant Services - With base resources of 361 workyears and \$12,116,000, (exclusive of the rent and utilities budgets), the Office of Plant Services operates; maintains and repairs the Smithsonian's physical plant on or near The Mall, including over 4.8 million net usable square feet in museums and art galleries. In addition, OPlantS operates, maintains and repairs 82,000 square feet of space in the Cooper-Hewitt Museum in New York City. Services also are provided to other work and storage areas including the Museum Support Center at Suitland, Maryland, and space in leased facilities. These services include maintenance of building interiors and exteriors, all mechanical and electrical equipment, such as elevators and escalators, lighting and refrigeration components, and emergency repairs to property which are accomplished by service contract. Operational responsibilities for utilities funding and management include the maintenance of large and complex air conditioning, heating and ventilating systems and electronic environmental control systems essential for the protection of buildings, specimens, objects, paintings and sculptures. Trade and craft assistance, including carpentry, painting, plumbing, plastering, sheetmetal and electrical work, is provided to further research projects, office relocations and modifications, and exhibition installations and other public events at all museums.

OPlantS also maintains a supply warehouse at the Smithsonian Institution Service Center where heavily used supplies and materials, purchased in bulk to obtain the most favorable price, are stored and distributed. Packing, crating, warehousing and moving services for museum objects and collections also are performed by OPlantS. In addition, the Office is responsible for oversight of communications systems including the management and funding of telephone installations and services (Federal Telecommunications Network System and local calls) and for the processing of mail and monitoring of postage costs. Transportation services, including the repair and operation of vehicles, are carried out by the Office as well.

The Computerized Preventive Maintenance System for scheduling preventive maintenance requirements continues to provide for a highly reliable and efficient physical plant operation. The preventive maintenance program schedules periodic maintenance for fire prevention, automatic lighting, guard stations, roofing systems and heating, ventilating and air conditioning mechanical equipment in all Washington, D.C. museums, and the Smithsonian Environmental Research Center near Edgewater, Maryland.

The Computerized Facilities Monitoring System continues to analyze effectively the operation of various mechanical equipment in major Smithsonian museums. The System uses sensors on over 1,893 points located on equipment and automatically alerts a central control center to equipment malfunctions. These automatic alerts have aided in avoiding costly repairs over the past several years.

II. Office of Horticulture - With base resources of 41 workyears and \$1,342,000, the Office of Horticulture applies the disciplines of horticulture as an educational, scientific, research, exhibition, and display activity for the Smithsonian Institution.

The Office provides horticultural services to all museums, to include interior and exterior landscape management from design through installation in addition to maintenance; research and development of historically styled gardens for museum grounds and special exhibitions; interior plantscapes; management of grounds around museums; and operation of a large greenhouse-nursery complex. Responsibilities of the Office also include exterior buildings and grounds pest control; snow and ice removal from sidewalks, roadways, parking lots and decks in locations on and off The Mall, and trash policing of grounds.

III. South Group Buildings Management - With base resources of 41 workyears and \$1,005,000, South Group Buildings Management is responsible for the cleaning, minor maintenance, labor services, relamping, craft services, shipping and receiving, special events preparation, contract coordination for maintenance, trash removal, pest control and renovation projects for the Arts & Industries and the Smithsonian Institution Buildings. Because of the frequent use of the two buildings for major events, higher than normal levels of maintenance and cleaning are required. Services are provided on a seven-day-a-week basis. Additional demands are being placed on staff due to construction of the Quadrangle and ongoing renovation of the exterior and roof of the Arts and Industries Building.

#### EXPLANATION OF PROGRAM INCREASE:

For FY 1986, an increase of 21 workyears and \$1,216,000 is requested. Of this amount, a sum of \$650,000 is sought to provide adequate base funds to strengthen OPlantS' ability to perform preventive maintenance and repairs to Smithsonian facilities. Of the \$650,000 requested, \$84,000 is needed to cover full-year salary costs of the 28 additional positions approved by Congress in FY 1985 for which only partial funding was provided, and \$566,000 is needed to provide adequate base funds for supplies needed by OPlantS' personnel to operate, maintain and repair the Institution's large and complex physical plant. The balance of the request is for the Quadrangle, and totals 21 additional workyears and \$566,000 for essential maintenance functions, consisting of: 6 workyears and \$205,000 to establish physical plant maintenance and repair capabilities; 2 workyears and \$40,000 to maintain the grounds and interior plantings; and 13 workyears and \$321,000 to establish cleaning, minor maintenance, labor, relamping, and craft services capabilities.

Supplies Base Deficiency (\$566,000) - For FY 1986, an increase of \$566,000 is needed to correct a shortage of base funds for essential supplies used extensively by OPlantS in maintaining Smithsonian buildings and in making essential emergency repairs to mechanical and electrical systems installed throughout the Institution's physical plant. To document this base shortage and support this budget request, a comprehensive analysis has been done to show the cumulative effects of recent year appropriation actions. The results of this analysis are shown on the table on page 204. The table demonstrates that despite increases provided by the Congress for program and inflation purposes, other actions by the Congress have hit hardest within the supplies account and, as a consequence, large amounts have had to be reprogrammed away from approved Institutional research, collections management, exhibition and other public programs in order to cover primarily the costs of basic supplies. The Institution has not stated this problem clearly in prior budget justifications and reprogramming requests but believes that the following explanation will clarify the reasons why the current shortage exists.

The table shows that a shortfall of \$257,000 in base funds needed to purchase basic supplies existed in FY 1981. Also shown, are program and inflation increases for supplies totaling \$802,000 provided by Congress between fiscal years 1982 and 1985. Of this amount, \$116,000 in base funds (and costs) for supplies was reorganized out of OPlantS in FY 1983 consistent with the transfer of responsibility for procuring lighting supplies to individual museums. Consequently, OPlantS, since FY 1981, has received a net increase of \$686,000 for supplies.

The net increase of \$686,000 provided for supplies between fiscal years 1981 and 1985, however, has been more than offset during this period by the four percent budget reduction suffered in FY 1982 of which \$744,000 was taken from supplies. As a result of this budget reduction, which was prorated among various object classes of expense, base funds available to OPlantS in FY 1985 for supplies are actually \$58,000 less than in FY 1981.

The additional \$566,000 requested for basic supplies will alleviate the base deficiency that existed in FY 1981 and remains uncorrected (\$257,000); compensate for reduced base resources between fiscal years 1981 and 1986 (\$58,000); and based on thorough surveys of supply requirements, provide funds to cover higher supply costs due to inflation experienced over and above amounts provided, program growth, and the increased emphasis now placed on physical plant maintenance (\$251,000).

OPlantS strives to economize wherever possible, including procuring supplies through the General Services Administration or through GSA Schedules, procuring in bulk quantities to obtain price reductions, and requiring competitive bids whenever appropriate. Reductions in the volume of supplies purchased each year are not possible without endangering the condition of the buildings, the safety of collections, and the efficient operation of Smithsonian staff.

Reducing existing staff levels below the approved ceiling of 361 workyears is not considered an acceptable alternative to cover the base shortage in supplies. To realize a dollar savings equal to the base shortage amount, a reduction of 22 workyears would be required. Such a reduction in staff would have an impact on virtually all Smithsonian programs and operations. For example, reductions in staffing levels would affect the timely pick-up and delivery of mail; reduce essential communications services; lengthen repair time of vehicles; disrupt the delivery of supplies, materials and artifacts throughout the Institution; and significantly reduce support to museum exhibit programs, which in turn could force the delay or cancellation of scheduled major exhibitions. Most significantly, a staffing reduction would reduce OPlantS' ability to perform essential repairs to facilities and preventive maintenance functions which would likely result in early replacement of equipment and increase future restoration and renovation requirements.

Full Year Funding for Existing Staff (\$84,000) - For FY 1986, \$84,000 is requested to provide full-year salaries and benefits funds for 28 positions provided by the Congress in FY 1985 to continue OPlantS' program of reducing the backlog of essential preventive maintenance work. This amount, in addition to \$375,000 appropriated in FY 1985, will provide OPlantS with full-year funding in FY 1986 for these positions. Moreover, these funds, together with existing base resources available to pay staff, will enable OPlantS to fully-fund the salary and benefits costs in FY 1986 of all 361 FTE positions authorized, as shown on the table on page 204.

Quadrangle-Related Support (21 workyears and \$566,000) - For the Quadrangle, a total increase of 21 workyears and \$566,000 is sought: to provide physical plant operation and maintenance and repair capabilities (6 workyears and \$205,000); to extend horticultural services to the Quadrangle grounds and complex (2 workyears and \$40,000); and to establish a Building Management unit that will provide custodial and other support services to Quadrangle organizations (13 workyears and \$321,000).

Upon completion of the Quadrangle in early 1986, the Office of Plant Services will assume responsibility for operation and repair of the building's utilities systems and for performing other necessary building maintenance functions. For FY 1986, 6 workyears and \$150,000 are sought to fund the part-year salary and benefits costs of eleven maintenance mechanics. (Funding for the full-year costs of these positions is anticipated in the FY 1987 budget request.) These positions are essential to operate and maintain the

complicated heating, ventilating and air conditioning (HVAC) systems that will maintain stable temperature and relative humidity conditions necessary for the preservation of the collections stored and exhibited within the Quadrangle. The HVAC systems must be monitored continuously to insure that the equipment is operating within acceptable levels of efficiency, energy consumption and safety. In addition, scheduled preventive maintenance tasks for the complex HVAC systems and fire and smoke detection systems must be performed. Preventive maintenance programs in effect for other Smithsonian buildings help to avert major damage to valuable collections that are sensitive to changes in temperature and humidity conditions. A further sum of \$55,000 is required for maintenance supplies, materials and service contracts to support this basic and essential physical plant work.

Two additional gardeners (2 workyears and \$40,000) are required to assist in developing and maintaining the landscape and several distinctive gardens planned for areas bordering the Quadrangle. When completed, the new Quadrangle gardens will occupy an area of approximately 350,000 square feet. This represents an increase of 219,320 square feet over the garden and grounds that are being replaced. Victorian parterres will be used which require weekly trimming and edging, and landscaping will include conifers, rock work and water. Other tasks to be performed include maintenance of interior plants, such as flowering seasonal plants and orchids, and greenhouse activities necessary to grow the many types of plants planned for display.

A further 13 workyears and \$321,000 are sought to establish a Building Management unit to provide a wide variety of support services to all organizations to be located in the new Quadrangle. These organizations include the Sackler Gallery, Museum of African Art, International Center and related activities, Smithsonian Institution Traveling Exhibition Service, and National Associate and Resident Associate Programs. Services to be provided include cleaning, minor plumbing and electrical maintenance, labor services, relamping, plumbing, electrical, shipping and receiving and contract coordination. The Buildings Management staff will consist of three organizational sections: Facilities and Administration; Facilities Maintenance; and Custodial and Labor Services. The Facilities and Administration section, which will be responsible for direction and oversight of all building management functions, will include initially a facilities manager, a supply clerk, a shipping clerk and a clerk-typist. The Facilities Maintenance section, responsible for electrical, plumbing, painting and other required minor maintenance services, will be staffed initially by four trades and craft personnel including a general maintenance foreman, one electrician and two maintenance mechanics. The Custodial and Labor section will be responsible for keeping all areas of the building clean, for performing labor tasks such as moving of heavy equipment and supplies, and unloading trucks at the loading dock. A custodial foreman, custodial leader, six custodial workers, a labor leader, seven laborers, and a forklift operator are required to perform these support services. For these 25 positions, 13 workyears and a sum of \$232,000 are sought in FY 1986. (Funding for the full-year cost of these positions is anticipated in the FY 1987 budget request.) An additional sum of \$89,000 is needed for cleaning and other supplies, safety shoes and uniforms for staff and contractual services including trash removal and pest control.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Unrestricted General Trust funds are provided by allotments and are used primarily to cover salaries and support costs of six full-time positions (estimated expenditures of \$234,000 in FY 1985 and \$248,000 in FY 1986) and to provide for the payment of the Trust fund share (40 percent) of the Smithsonian's annual costs for the use of the Federal Telecommunications Network System and for the Trust fund share of space rental costs for administrative activities located in L'Enfant Plaza (estimated expenditures of \$793,000 in FY 1985 and \$847,000 in FY 1986). Special Purpose funds are provided primarily from user reimbursement for services rendered to Trust-funded units and are used to purchase supplies, services, equipment and landscaping materials.

HISTORY OF OPLANTS BASE SHORTAGE

FY 1981 - FY 1986  
(\$000's)

1

Budgetary History	FY 1981				FY 1982				FY 1983			
	Staff	Supply	All Other	Total	Staff	Supply	All Other	Total	Staff	Supply	All Other	Total
Prior Year Base	6632	452	744	7828	7140	468	750	8358	7683	101	657	8441
Prior Year Pay Raise	345			345	501			501	350			350
Congr. Approp.								0				0
--Necessary Pay	64			64	84			84	105			105
--Inflation		41	6	47		84	4	88		59	55	114
--Program Increase	99			99		293	57	350		352	298	650
--Restored Positions				0				0	63			63
Across The Board Reduction/1				0	-42	-744	-154	-940				0
Position Mgt. Reduction				0				0				0
Reorganization		-25		-25						-116	25	-91
Current Year Base	7140	468	750	8358	7683	101	657	8441	8201	396	1035	9632
Current Yr. Pay Suppl.	407			407	210			210	196			196
Total Funds Available	7547	468	750	8765	7893	101	657	8651	8397	396	1035	9828
Actual Costs (est. FY85-86)	7525	725	751	9001	7788	963	1011	9762	8443	819	1090	10352
Base Shortage Met Through Reprogramming	\$ 22	\$- 257	\$ -1	\$-236	\$ 105	\$-862	\$-354	\$-1111	\$ -46	\$-423	-55	\$ -524

Budgetary History	FY 1984				FY 1985				FY 1986			
	Staff	Supply	All Other	Total	Staff	Supply	All Other	Total	Staff	Supply	All Other	Total
Prior Year Base/2	8201	396	1035	9632	8883	406	1185	10474	9476	410	1240	11126
Prior Year Pay Raise	393			393	215			215				0
Congr. Approp.				0				0				0
--Necessary Pay	107			107	199			199				0
--Inflation			94	94		4	89	93				0
--Program Increase	119	10	21	150	375			375				0
--Restored Positions	63			63				0				0
Across The Board Reduction/3				0	-193		-34	-227				0
Position Mgt. Reduction				0	-3			-3				0
Reorganization			35	35								
Current Year Base	8883	406	1185	10474	9476	410	1240	11126	9476	410	1240	11126
Current Yr. Pay Suppl.	133			133								
Total Funds Available	9016	406	1185	1607	9476	410	1240	11126	9476	410	1240	11126
Actual Costs (est. FY 85-86)/4	8958	874	1112	1944	9649	985	1251	11885	9560	976	1240	11776
Base Shortage Met Through Reprogramming	\$ 58	\$-468	\$ 73	\$-337	\$-173	\$-575	\$ -11	\$ -759	\$ -84	\$-566	\$ 0	\$ -650

/1 In FY 1982, due to insufficient funds to defray utilities costs, the four percent reduction was applied to OPLANTS' operations account.

/2 For FY 1985 and FY 1986; does not include \$687 thousand in base funds associated with the Museum Support Center.

/3 In FY 1985, the two percent reduction was applied to both OPLANTS' utilities and operations accounts.

/4 For FY 1985 and FY 1986; does not include increased staff costs resulting from pay raises effective in FY 1985.

SUMMARY

FY 1981 Base shortage - Supplies	-257
Program and inflation increases granted by Congress for supplies FY 1982-1985	802
Four percent reduction, FY 1982	-744
Reorganizations effecting base funds for supplies FY 1982-1985	-116
Increased costs for supplies FY 1981-1986 est.	-251
<b>Total, OPLANTS FY 1986 Base Shortage - Supplies</b>	<b>\$-566</b>

MUSEUM PROGRAMS AND RELATED RESEARCH  
(SPECIAL FOREIGN CURRENCY PROGRAM)





SMITHSONIAN INSTITUTION  
MUSEUM PROGRAMS AND RELATED RESEARCH  
(SPECIAL FOREIGN CURRENCY PROGRAM)

1984 Appropriation.....	\$7,040,000	] -Equivalent in Excess Foreign Currencies
1985 Estimate.....	\$8,820,000	
1986 Estimate.....	\$2,500,000	

For FY 1986, the Smithsonian requests \$2,500,000 equivalent in foreign currencies which have been determined by the Treasury Department to be in excess of the normal needs of the United States. The Smithsonian Institution's Special Foreign Currency Program makes grants to United States universities, museums, and other institutions of higher learning, including the Smithsonian itself, primarily for research and advanced professional training in fields of traditional Smithsonian competence.

This appropriation will be used:

- to continue a program of grants to United States institutions for research in those countries where excess local currencies are available (\$1,480,000); and
- for the fourth and final increment of the United States contribution to the international effort to restore and preserve the ancient city of Moenjodaro in Pakistan (\$1,020,000).

PROGRAM OF GRANTS FOR RESEARCH

The Smithsonian program is a major source of excess foreign currency support for research carried out by United States institutions in the excess currency countries. It is distinguished from other Special Foreign Currency Programs in that the full responsibility for the design, execution and publication of research results rests with a scholar working within the program of a United States institution. Currently Burma, Guinea, India, Pakistan, and Poland are so designated. However, India will not be an excess currency country in FY 1986. Smithsonian foreign currency grants strengthen the research and training activities of collaborating institutions abroad, since most projects directly involve host country institutions and scholars. Enduring professional ties which result from joint efforts and scholarly exchange contribute to the strongest form of United States cultural and scientific relations with other nations. Also, these ties contribute to the integration of the worldwide advancement of science which serves to narrow the gap between the industrial and the developing nations.

The Importance of Research in the Natural Sciences and Cultural History

The rapid growth of world population and technological development has resulted in significant effects on the natural environment and on society. Research sponsored by the Smithsonian in the natural sciences and in cultural history is aimed in part at improving understanding of the environment and of the management and conservation of scarce natural and cultural resources.

In FY 1984, grants supported the following projects of special interest:

The study of the great Buddhist caves at Ajanta in India has been enhanced by a complete photographic record of the remarkable 1500-year-old cave paintings.

Historians are participating in multidisciplinary studies on the depletion of tropical forests in India in an effort to provide a model for the study of long-term ecological change in tropical forests.

United States and Indian geologists are using recently developed fission tracking procedures on uranium bearing sandstone as an aid to the study of the history and movement of ancient ground water.

The unique reproductive biology of the mugger crocodile, currently endangered on the Indian subcontinent, is being studied to develop captive breeding and rearing programs.

Further, with emphasis on information exchange through small workshops, symposia and field conferences, the Smithsonian is encouraging international research in specialized areas. In FY 1984, for example, United States scholars received support for participation in exchanges on the subjects of arid land studies, numismatics, tiger management, Hindi studies, solar-terrestrial physics, and natural history collections.

### The Importance of Multiyear Grants

Beginning in FY 1979, the Smithsonian Foreign Currency Program began a policy of multiyear funding of major programs, whenever sufficient funds were available. Such funding is important because rational planning requires the advance commitment of professors' and graduate students' time as well as facilities. Multiyear grants, with annual disbursements subject to satisfactory review of progress by the advisory councils, allow participating institutions to coordinate such projects into their long-range scholarly programs, by providing some assurance of funding for the duration of the project.

Further, the Smithsonian has been able to use multiyear grants to protect successful projects from sudden termination when excess currency accounts were exhausted abruptly. This happened in Poland and Tunisia in 1976 and in Egypt in 1981. With multiyear funding over a three-year period, ten projects in Egypt were brought to reasonable conclusions and three continuing projects gained sufficient time to seek other financial sources. Multiyear funding of projects in India is planned in 1985 to bring some ongoing projects to completion.

### Benefits to United States Institutions

Since the inception of the program in FY 1966, Smithsonian grants have been made to 233 United States institutions in 41 states, Puerto Rico and the District of Columbia to support more than 800 individual projects. Publications known to have resulted from program grants totaled more than 1,400 to date.

The benefits to United States institutions and the host country go beyond the accumulation of data, extending to acquisition of collections of biological specimens and the archeological and ethnographic materials that are acquired in the course of field research. These remain available for further study and interpretation by other generations of scholars long after the research teams supported by the Smithsonian have dispersed and their conclusions have been published. More than 100 such research collections have been placed in United States universities and museums. A similar number of collections have been added to the research resources of the excess currency countries.

The advantages of the program have extended to a far greater number of institutions than the 233 United States institutions which have received grants directly. For example, three of the grantee institutions are consortia of United States scholarly institutions. They are the American Institute of Indian Studies (AIIS) in Chicago, Illinois, with 39 institutional members; the American Research Center in Egypt (ARCE) in New York City, with 27 institutional and approximately 600 individual members; and the

American Schools of Oriental Research (ASOR) in Cambridge, Massachusetts, with 135 member institutions.

Smithsonian grants have supported the research in India of more than 550 AIIS fellows over the 17-year period from FY 1968 through FY 1984. Program grants also supported more than 80 ARCE projects over the 18-year period from FY 1966 through FY 1983, and since FY 1977, 80 ARCE fellows received Smithsonian support. Nine ASOR excavations in Israel and Tunisia provided research opportunities for more than 260 senior U.S. scholars and field training for more than 324 graduate students. The Indo-American Fellowship Program, initiated in FY 1977 under the auspices of the Indo-U.S. Subcommission on Education and Culture, has sent more than 70 scholars from United States institutions to India.

#### Scientific Review Under the Smithsonian Program

The Smithsonian program considers proposals from any qualified American institution for research in fields of traditional Smithsonian competence. In reviewing the proposals, the program seeks the advice of experts in the specific area of sciences to be studied and annually convenes advisory councils of senior scholars from across the Nation. Following the recommendation in the House-Senate Conference Report 95-1672 dated September 29, 1978, the National Science Foundation reviews the credentials of the members of the advisory councils and certifies their competence. The councils discuss and evaluate the proposals, taking into consideration the experts' opinions, and provide specific advice to the Smithsonian regarding the selection of proposals recommended for support and the priorities among them.

Foreign currency awards to other institutions are executed as normal Federal contracts, with the American grantee institutions providing for full fiscal accountability. The Smithsonian audits each grantee's periodic financial reports and where grantees maintain records abroad, conducts site audits to ensure that appropriate accounting procedures are followed.

An annual review of scientific progress is made by the advisory councils before another year of funding is approved. In addition, Smithsonian staff scientists and program advisory council members make onsite visits when firsthand reports are considered necessary. Smithsonian policy requires that grantees publish scientific results and that scientific collections be readily accessible to the scholarly community.

#### The Importance to the Smithsonian of Awards for Research

Access to funds for independent research is an essential factor in enabling the Smithsonian to attract and retain leading scholars and thereby to maintain a standard of excellence as a research institution. In this context, the Institution's initial request in FY 1966 for an appropriation of excess foreign currencies made it clear that Smithsonian scholars would compete for these funds. The appropriation justification in that year stated that the Institution would "...award and administer foreign currency grants...for maximum benefit of all participating institutions, as well as the Smithsonian." This appropriation has provided Smithsonian scholars an opportunity to pursue new and innovative research.

Under the Special Foreign Currency Program guidelines, Smithsonian proposals are reviewed by the same councils of distinguished scholars as are proposals from outside institutions. Continuing projects also are subject to annual reviews. (These processes are described above in the section entitled "Scientific Review under the Smithsonian Program.") The Special Foreign Currency Program awards to Smithsonian employees, as to other scholars, often involve participants from other organizations and universities as collaborators. No Smithsonian employee, nor any other grantee, receives personal com-

pensation to duplicate or supplement their salary. Program awards cover only field research costs in the excess currency country, travel to that country, and the cost of publications resulting from research conducted in "foreign currency" countries.

The awards to Smithsonian employees are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended in accordance with Federal procurement and personnel regulations.

#### FORWARD-FUNDED RESERVE FOR THE AMERICAN INSTITUTE OF INDIAN STUDIES

Since 1967, the Smithsonian has provided annual funding to the American Institute of Indian Studies for fellowships, research, symposia and publications and for administrative costs. The Smithsonian has helped sustain this Institute and other American research centers abroad for more than a decade because of their significant contributions to scholarship and science without regard for national boundaries and their special service to American scholars conducting research.

In FY 1980, FY 1981, FY 1984, and FY 1985, anticipating the future depletion of the excess Indian rupee, the Smithsonian sought and received appropriations totaling \$7,170,000 for a forward-funded reserve for continuation of the activities of the American Institute of Indian Studies after the demise of the excess currency program in that country.

The Treasury Department has announced that FY 1985 is the last year of excess status for the Indian rupee. Thus, in FY 1986, the AIIS will begin to draw from the forward fund for its Indian programs. The Smithsonian will continue to monitor the progress of AIIS programs through annual proposals screened by a peer review panel. Annual increments of funds will be released upon successful scholarly and administrative review.

#### INTERNATIONAL EFFORT TO SALVAGE MOENJODARO

In 1921, two important discoveries were made in the Indus Valley of India, now Pakistan, when archeologists discovered the remains of the cities of Harappa, near Lahore, and Moenjodaro, about 250 miles north of Karachi. These two cities apparently are the products of the Harappan civilization which flourished over 4,500 years ago, from about 3000 B.C. to 1500 B.C. Moenjodaro, a city of a square mile, is the larger and more impressive of the two sites. From the standpoint of planning, sanitation and social organization, this city anticipated developments which only blossomed several thousand years later.

The excavated ruins at Moenjodaro have been threatened since their discovery by two main causes of destruction: floods of the Indus River and highly saline ground waters have caused the serious deterioration of the excavated remains.

Since the 1960s, the Government of Pakistan has appealed to the international community for assistance in salvaging Moenjodaro by diverting the river, lowering the water table, providing remedial action to stabilize threatened buildings and preventing disintegration of those that have not been damaged seriously yet, and installing appropriate landscaping. UNESCO responded to Pakistan's appeal and, in 1974, agreed to lead an international fund-raising campaign. In the interim, the Government of Pakistan, with the assistance of UNESCO, has conducted a series of technical studies relating to river control, dewatering and other methods conducive to the eventual preservation of the site.

The project, long in the planning stage, is under way, with a ground water control scheme now in place. Requisitions are being prepared for water pumps, for the con-

solidation and treatment of the remaining structure and for landscaping. Salt-resistant plants will be planted for erosion control and to provide suitable protection from wind-driven sands.

On October 10, 1979, an agreement was signed between UNESCO and the Government of Pakistan for the preservation and development of the monumental site of Moenjodaro. Following this, an Executive Committee of the Campaign was set up to advise the Director-General of UNESCO on all aspects of the project. The Committee has held several meetings during which various aspects of the plans were reviewed.

To date, UNESCO has raised approximately \$9,300,000, mainly from governmental contributions of member states, and the Government of Pakistan has made a commitment of \$3,000,000 for the project. The funds raised thus far have been deposited in an international trust fund for Moenjodaro. Considering that the total budget for the project is now estimated at more than \$19,000,000, the Committee is seeking new or additional contributions.

In FY 1982, the Institution transferred to UNESCO the appropriation of \$960,000 equivalent in nonconvertible Pakistani currency as an initial contribution from the United States toward this important project. In FY 1984 and FY 1985, \$1,040,000 and \$980,000 were conveyed respectively. The Smithsonian is seeking a fourth and final increment of funds for this project in FY 1986, a sum of \$1,020,000 equivalent in Pakistani rupees, to complete the United States contribution.

Although the United States has withdrawn from UNESCO beginning January 1985, the funds for this important activity can continue to be made available to the campaign through another means, such as a United States educational organization in Pakistan.



FACILITIES PLANNING, RENOVATION,  
RESTORATION, AND CONSTRUCTION





SMITHSONIAN CONSTRUCTION, RESTORATION AND RENOVATION PROGRAMS

<u>ACCOUNT</u>	FY 1984 <u>Appropriation</u>	FY 1985 <u>Appropriation</u>	FY 1986 <u>Estimate</u>
Construction & Improvements: National Zoological Park	\$ 3,500,000	\$ 4,851,000	\$ 4,851,000
Restoration & Renovation of Buildings	9,000,000	13,475,000	14,875,000
Construction: Quadrangle	<u>-8,000,000</u>	<u>-0-</u>	<u>4,000,000</u>
TOTAL:	\$4,500,000	\$18,326,000	\$23,726,000

The Smithsonian has developed a carefully planned, integrated improvements program for restoration, renovation and repair of existing facilities and the planning, design and construction of additional facilities essential to future programmatic needs. Since each of the many projects planned requires study, planning, and design before drawings and specifications can be issued for bid solicitation, it is necessary to forecast these projects in advance of seeking authorizations and appropriations. Further details of the Institution's construction, restoration and renovation programs will be provided in the Five-Year Prospectus FY 1986 - FY 1990.

The FY 1986 request for Construction and Improvements at the National Zoological Park represents the Smithsonian's commitment to continue short- and long-range improvement efforts designed to place the Park among the world's finest zoos. Resources are included to construct a new hospital essential for the health of the animals at the Rock Creek site. Funds are sought also for essential programs for renovation, repair and preventive maintenance of existing facilities at both the Rock Creek and Front Royal sites.

The FY 1986 request for Restoration and Renovation of Buildings (R&R) represents the Smithsonian's continuing commitment to preserve, maintain and repair its facilities and make improvements essential to meet programmatic requirements. Funds are sought to continue comprehensive programs to keep Smithsonian facilities, including roofs, facades and terraces, in good repair and efficient operating condition; provide for the safety and security of visitors, staff and collections through upgrading of existing and installation of new fire detection and suppression systems; remove hazardous materials such as asbestos; upgrade heating, ventilating and air conditioning systems to prevent irreparable damage to the National Collections due to inadequate environmental controls; and provide for the needs of disabled visitors and staff. The FY 1986 R&R request also provides for improvements necessary to meet research, collections management, conservation and exhibition program objectives of Smithsonian organizations, most notably at the Freer Gallery of Art and at the Smithsonian Tropical Research Institute.

For the construction program, additional resources are sought in FY 1986 (which will be matched by an equal share of nonappropriated Trust funds) for the Quadrangle which will house the Center for African, Near Eastern, and Asian cultures. Specifically, resources are sought for construction and for purchases of furnishings and equipment.

Justification for these programs and projects appears in the following section.

CONSTRUCTION AND IMPROVEMENTS  
NATIONAL ZOOLOGICAL PARK

1984 Appropriation.....	\$3,500,000
1985 Base.....	\$4,851,000
1986 Estimate.....	\$4,851,000

This appropriation is for use at the National Zoological Park for repairs, alterations and improvements to the plant property, and for the construction of additions to existing facilities and minor new facilities including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations and new construction for implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973. The Zoo's facilities include 163 acres in the Rock Creek Valley of Washington, D.C., and a 3,150-acre Conservation and Research Center located in Front Royal, Virginia. Construction and improvements are accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are above acceptable cost levels in relation to the proposed work. In such cases, accomplishment of the work by other means, such as the purchase of supplies, materials and equipment and the use of current staff or temporary labor, is the most economical alternative. Furthermore, occasionally it is necessary to fund other related expenses from this account, particularly those associated with the displacement of animals as a result of the construction program or major grounds maintenance in repair of storm damage.

Status of the Construction Program - The National Zoological Park was established in 1890 under the Board of Regents of the Smithsonian Institution, which was authorized to "administer and improve" the Zoo for "the advancement of science and instruction and recreation of the public" (20 U.S.C. 81). The Zoo administers two permanent facilities. Exhibition and educational functions have been centered since 1890 on 163 acres in Rock Creek Valley of Washington, D.C. Complementary animal conservation and breeding functions have been conducted since 1975 on a 3,150-acre site near Front Royal, Virginia.

The National Zoo's Rock Creek facilities have been undergoing major renovations and improvements since FY 1974 through implementation of the Master Plan. With the transfer of selected and critical animal breeding functions to Front Royal, the elimination of costly projects and the scaling down of others, the total Rock Creek Master Plan program has been reduced from an original plan of 41 major projects and an estimate of \$118,000,000 to less than 30 projects and a current estimate of \$81,090,000. The total of \$40,000,000 appropriated through FY 1985 has been spent on 26 new exhibits and support facilities. During FY 1985, a revised Master Plan will be developed that incorporates changes in exhibit concepts as they have evolved during the past decade. The revised Master Plan will place the Park among the world's finest zoos.

With funds appropriated in FY 1985, the Zoo will begin renovation of the Olmsted Walk area. Under the first phase of this project, the section of Olmsted Walk from the Rock Creek entry up to the Small Mammal Building will be renovated to create an identifiable pedestrian entrance at the Rock Creek side of the Zoo. New overlooks will be created above the Beaver Valley exhibits. A new gibbon facility and modified tortoise yard will be included as part of the Phase I improvements.

In FY 1986, planning will be completed for an Aquatics Exhibit for which preliminary design funds were appropriated in FY 1985. Construction funds to complete the design and construct the facility are included in the FY 1987 planning figure.

For FY 1986, an amount of \$4,851,000 is requested to support projects at the two sites operated by the National Zoological Park. A sum of \$4,500,000 is sought for Rock Creek improvements as follows:

Hospital and Research Renovation (\$3,300,000) - The National Zoo currently operates its animal health, pathology, and basic research program out of inadequate, inefficient and potentially dangerous facilities. For FY 1986, a sum of \$3,300,000 is sought to construct a new animal health and pathology building. (Additional monies for essential hospital equipment will be necessary in FY 1987.) The existing Hospital and Research building is now nearly 15 years old and was an unsatisfactory compromise between needs and available finances when it was first built. It never has met the need for a modern veterinary hospital.

The existing Hospital has major design problems which make its space virtually unworkable when nearly 500 animals must be hospitalized annually. First, the surgery cannot easily accommodate larger mammals such as the giant panda and certain work on sick patients must be conducted in their home cages in unsatisfactory working conditions. The location of the x-ray, pre-treatment, and surgery rooms within the hospital make transport of large animals for diagnosis and treatment extremely unwieldy and inefficient. There is no intensive care unit which will accommodate larger animals or provide sufficient isolation for sick animals. Large animals generally must recover in exhibit cages.

That the Zoo's animal population has maintained an excellent health record is a tribute to the dedication and skill of its veterinary staff. Delay in providing modern facilities must lead sooner or later to the unnecessary loss of rare, valuable and irreplaceable specimens. Logistically the only method of upgrading the hospital while it continues to function is to build a replacement hospital that is ergonomically designed.

The new hospital building will be completely self contained and built in the vicinity of the existing Holt House. It will contain approximately 17,000 square feet. The hospital will be designed around a large operating room/surgery with adjoining anesthesia, diagnostic, pre-operative and recovery rooms in an interconnected cluster. Access to the treatment cluster from the outside will be by way of a wide corridor leading from a large ramp for ambulances. This modern design will facilitate good medical practice and eliminate the problems encountered in the present design. The old hospital space will be refurbished to provide much-needed modern research space. It is anticipated that funding for this will be requested in FY 1987.

Renovation, Repairs and Improvements: Rock Creek (\$1,200,000) - An amount of \$1,200,000 is requested to continue the program of renovation, repairs and preventive maintenance of existing facilities at Rock Creek where there are over 60 facilities of varying ages, and 163 acres of land containing over 18 miles of heavily used paths and roadways. The pedestrian paths and vehicle roadways require regular maintenance in order to prevent future, more costly repairs and construction. Renovation, repairs and improvement funds also are used to complete necessary repairs to mechanical, electrical, plumbing and support systems; animal exhibits and housing; and to pay for temporary relocation of animals during the time when repairs are being done.

The Zoo plans to use the amount sought in FY 1986 for the following renovation and improvement projects:

General Repairs and Improvements (\$100,000) - Funds are required to support emergency repairs that cannot be anticipated in advance. Projects may include repairs to roadways and buildings due to storm damage, erosion control and other unanticipated events.

Structural Repairs and Exhibit Restorations (\$250,000) - A number of the Zoo's exhibition buildings are in need of structural repairs to roofs and heating, ventilating and air conditioning systems. In addition, the underground utilities system

requires overall repair and maintenance. To accomplish this work, a sum of \$100,000 is sought in FY 1986. A further amount of \$150,000 is requested for the repair of water leaks and other concrete damage to the basement of the Reptile House in preparation for the installation of an invertebrate exhibit.

Seal Filter System Renovation (\$300,000) - The existing water filtration system for the seal exhibit, installed in 1977, is not adequate to provide the required water quality in the 120,000-gallon pool. It is necessary to renovate the filtration system to provide the water quality necessary to exhibit these aquatic mammals. The renovation will incorporate the same state-of-the-art design used in the FY 1984 renovation of the 400,000-gallon sea lion exhibit.

Wetlands Renovations (\$550,000) - This project will consist of renovation of the Wetlands Exhibit located at the Rock Creek entrance to the Park (currently known as the Native Water Fowl Exhibit). The area involved is approximately 90,000 square feet. The existing concrete ponds were constructed in 1935 and 1940 with some renovation taking place in 1964. This project will completely renovate the site by resealing the existing pools to stop major leaks. Some pools will be increased in depth to satisfy the species habitat requirements; existing systems for water quality and deicing will be repaired; a system to prevent predators from freely moving into the enclosure will be installed; vertical barriers used to contain species will be renovated to improve visitor viewing; and landscaping will be improved with aquatic plants to allow adequate breeding and nest building conditions. Walkways will be provided through this exhibit to provide convenient pedestrian movement, good viewing of animals and improved access for keeper and maintenance personnel.

Renovation, Repairs and Improvements: Front Royal (\$351,000) - For the Zoo's Front Royal Conservation and Research Center, an amount of \$351,000 is requested to continue the program of renovation and repair of existing facilities at the Conservation and Research Center at Front Royal, Virginia. The Conservation and Research Center includes 89 facilities of various types, containing approximately 236,000 square feet of space, two and one-half miles of paved roads, 20 miles of jeep trails, and 30 miles of fences, all of which must be maintained. Funds also will be used for upgrading the Center's utility systems.

#### FY 1987 - FY 1990

For the period FY 1987 - FY 1990 the construction program follows the NZP's system of planning and designing and then proceeding with construction based on realistic plans and designs with adequate provision for additional support requirements. Projects are defined in the Smithsonian Institution's Five-Year Prospectus FY 1986 - FY 1990.

(\$000's)

NATIONAL ZOOLOGICAL PARK  
Construction Program  
1974-1990

<u>Activity</u>	<u>1974-84</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>Repro- grammings</u>	<u>TOTAL</u>
<u>I. Master Plan</u>									
Lion-Tiger Facility	3,000 /1								3,000
Elephant/Bird House	3,130							+26	3,156
Education-Administration Building	2,500							-157	2,343
General Services Facility	7,000							+834	7,834
Lower Rock Creek Valley	3,000							-1	2,999
Beaver Valley Area	6,410							-431	5,979
Central Area	10,390							-266	10,124
Waterfowl Pond and Small Cats	520							-15	505
Master Graphics	200								200
Health & Research Facility		400	3,300	3,000					6,700
Entranceway & Olmsted Walk	350	2,000		1,200	1,800				5,350
Aquatic Exhibits	500	651		12,000	1,500	16,000		-1	13,150
Parking Facility					600				17,500
Penguin Facility						150	1,500		600
Savannah & Plains Animals									1,650
Subtotals	37,000	3,051	3,300	16,200	3,900	16,150	1,500	-11	81,090
<u>II. Renovations, Repairs &amp; Improvements</u>									
Rock Creek	6,180	1,100	1,200	1,400	1,500	1,650	1,800	+11	14,841
Totals, Rock Creek	43,180	4,151	4,500	17,600	5,400	17,800	3,300	--	95,931

(\$000's)

NATIONAL ZOOLOGICAL PARK  
Construction Program  
1974-1990  
(continued)

<u>Activity</u>	<u>1974-84</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>Repro- grammings</u>	<u>TOTAL</u>
<u>III. Conservation and Research Center</u>									
<u>Development Plan</u>									
Hoofed Stock Barn	650								650
Small Animal Facility	1,680								1,680
Veterinary Hospital	1,400								1,400
Pachyderm Facility		200		400	4,000				4,600
Water Systems & Hydrants		50		500					500
Maintenance Facility				850					900
Waterfowl Facility				90	900				990
Primate Facility						150	1,500		1,650
Road Improvements/Extensions						80	800		880
Subtotals	3,730	250	0	1,840	4,900	230	2,300	--	13,250
<u>IV. Renovation, Repairs &amp; Improvements</u>									
Conservation & Research Center	4,804	450	351	600	650	650	700		8,205
Totals, Conservation & Research Center	8,534 /2	700	351	2,440	5,550	880	3,000	--	21,455
GRAND TOTALS	51,714	4,851	4,851	20,040	10,950	18,680	6,300	--	117,386

/1 Excludes \$275,000 for planning appropriated in FY 1973.

/2 Excludes \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings Account.

RESTORATION AND RENOVATION OF BUILDINGS

1984 Appropriation.....	\$9,000,000
1985 Appropriation.....	\$13,475,000
1986 Estimate.....	\$14,875,000

The Restoration and Renovation of Buildings (R&R) account is used to finance repairs, alterations and improvements to Smithsonian facilities. (The repairs and renovations at the National Zoological Park are presented separately in this budget submission.)

Smithsonian facilities are comprised of over 4 million square feet of building space located in 14 museum and gallery buildings (including the Quadrangle, now under construction) in Washington, D.C. and New York City, housing research and collections management activities and a wide range of exhibitions in the fields of science, history, technology and art. In addition, the Institution operates and maintains preservation, storage, aircraft and spacecraft display facilities and the Museum Support Center at Suitland, Maryland; centers for biological research, conservation and education in Panama and on the Chesapeake Bay near Edgewater, Maryland; a center for astrophysics in Cambridge, Massachusetts; and the Whipple Observatory on Mt. Hopkins in Arizona. These facilities range in age from new to 130 years old.

The Smithsonian's request of \$14,875,000 for FY 1986, coupled with ongoing planning of major initiatives in subsequent years, illustrates the Institution's commitment toward strengthening the restoration and renovation programs to better the condition of existing facilities and to a thorough and creative process of planning for and meeting future facilities requirements. Although funds are sought in this budget to continue a wide range of essential repair, alteration and improvement projects, major emphasis will be placed in this and subsequent years on restoring and renovating facades, roofs and terraces; improving heating, ventilating and air conditioning systems at facilities on and off The Mall; completion of design and installation of fire detection and suppression systems; continuation of work consistent with master plans developed for facilities; and the planning, design, renovation and construction of facilities to meet present and future research, collections storage, exhibition and other programmatic needs of the Institution.

The Institution's Five-Year Prospectus identifies specific categories of work which are estimated to cost approximately \$133.5 million between FY 1986 and FY 1990 (in 1985 dollars). The FY 1986 request of \$14,875,000 represents an increase of \$1.4 million over the FY 1985 R&R appropriation and emphasizes the Institution's commitment to establish the necessary level of annual funding for this account in consideration of the size, diversity, age, condition and character of the Smithsonian facilities. The justification for this year's budget request follows:

1. General repairs and improvements	\$ 475,000
2. Facade, roof and terrace repairs	2,600,000
3. Fire detection and suppression systems	1,000,000
4. Access for the disabled, safety and security, and correction of hazardous conditions	1,060,000
5. Utility systems repairs and improvements	1,745,000
6. Other projects	<u>7,995,000</u>
Total	\$14,875,000

GENERAL REPAIRS AND IMPROVEMENTS (\$475,000): Funds requested in this category support a wide variety of projects that do not lend themselves to discrete

categorizations; they also support minor unscheduled, but essential, repairs that cannot be anticipated specifically. Examples of projects include unforeseeable repairs or replacements of building systems or components which fail unexpectedly; modifications to create additional or more effective space for program activities; renovations of exhibition and other public spaces; and repairs to facility support systems. For FY 1986, an amount of \$475,000 is requested, of which \$100,000 is sought for emergency repairs, and \$160,000 is sought for minor repairs at off-Mall facilities such as plumbing, electrical, lighting, and floor and wall repairs. A further sum of \$100,000 is sought for repair and improvement to roads and parking lots at the Smithsonian Environmental Research Center near Edgewater, Maryland. An additional amount of \$300,000 is expected to be sought through FY 1989 to continue this project. For the Smithsonian Institution Building, an amount of \$50,000 is needed to replaster and repaint the north staircase which, at the ground floor, joins the public mall entrance to the Great Hall. Over the years, water intrusion from above the staircase has resulted in plaster cracking and extensive paint peeling, creating an unsightly condition in a prominent location in the building. The water problems have been resolved with temporary repairs. However, more permanent wall repairs are required, and the necessary funds to initiate such a program are included in the Facade, Roof and Terrace Repairs subaccount. An amount of \$50,000 is expected to be sought in FY 1987 to complete the replastering and painting. A sum of \$50,000 is required for museum sidewalk and parking lot repairs needed to eliminate hazards to the public and staff. For the Air and Space Museum's storage Building 22 at the Suitland Facility, an amount of \$15,000 is needed for a roll-up door. The existing sliding metal doors have deteriorated over the years and will be replaced with an overhead roll-up door equipped with an electric operating system.

FACADE, ROOF AND TERRACE REPAIRS (\$2,600,000): Maintaining the integrity of the exteriors of all Smithsonian buildings is critical to prevent major structural damage and deterioration due to age and weathering and to ensure a safe environment for visitors, staff and collections. Energy conservation also demands watertight and weather tight exteriors. Work in this category includes a variety of major projects that must be accomplished periodically according to the life cycles of the materials used. For example, roof replacements are needed about every 20 years; facade joints must be recaulked and repointed about every ten years; and window frames and other exterior trim should be recaulked and repainted every five years. Several Smithsonian buildings require large-scale renovation, and work is under way to assure that in the future adequate protection of the exteriors of these buildings can be provided through a preventive maintenance and repair program.

For FY 1986, a total of \$2,600,000 is sought to continue, complete and initiate essential roof and facade projects at seven Smithsonian buildings. A sum of \$1,500,000 will continue the multiyear roof and facade project at the Arts and Industries Building; \$200,000 will be used to continue the caulking and repointing of the facade of the Natural History Building; \$400,000 is needed for skylight and roof repairs at the Freer Gallery Building; \$300,000 is required for entrance modifications at the American History Building; and \$200,000 is required for caulking, repointing and window replacement at the Smithsonian Institution Building.

Excellent progress is being made in the renovation of the facade of the 120 year old Renwick Gallery Building. The Institution has proceeded carefully on this renovation project in order to assure that repairs will provide a permanent solution to the problem while maintaining sensitivity to the building's status as a National Historic Landmark. An amount of \$5.45 million has been appropriated through FY 1984 and the sum of \$500,000 appropriated in FY 1985 will be used to complete this project in mid-1986.

An amount of \$1.5 million, sought in FY 1986 to continue the multiyear renovation of the roof and exterior of the historic Arts and Industries Building, will assure watertightness, energy efficiency and further restoration of original architectural features.



Funds of approximately \$1.25 million were appropriated in FY 1977 and FY 1978 for the first phase of exterior renovation work. These were applied toward replacing the roofs of the courts, four halls and rotunda; repairing rotunda and hall windows; replacing gutters and downspouts; repainting the most deteriorated areas; and other related repairs. With \$225,000 appropriated in FY 1980, the Institution contracted for professional architectural/engineering services to provide the necessary analysis, documentation, cost estimates, detailed drawings and specifications for the remaining work. Funds of \$6.4 million, appropriated from fiscal years 1981 through 1984, are being used to continue the exterior restoration on a quadrant-by-quadrant basis. For example, amounts provided from FY 1982 through FY 1984 were used to restore the northwest quadrant, the west facade, the southeast and northeast pavilions, the southeast quadrant and east towers. The sum of \$2.5 million appropriated in FY 1985 is being used to restore the northeast quadrant, north entry and south towers. An amount of \$1.5 million is sought in FY 1986 to restore the southeast quadrant, including demolition and restoration of the east facade of the southeast quadrant. Restoration work includes the removal and replacement of existing (range, pavilion and tower) roofing, flashing and underlayment; removal of abandoned or nonoriginal elements, such as skylights, roof vents, exhaust ducts and mechanical equipment; and the repair, relocation or replacement of the roof drainage and guttering systems. Other major aspects of the project include replacement and improvements to window components (frames, sashes, glazing, painting, weather stripping and hardware) and the incorporation of an electronic security system; the provision for fire exit windows; the reconstruction, cleaning and repointing of exterior masonry; the removal of nonoriginal equipment located on the facade of the building (such as window air conditioning units, exhaust fans and steam pipes); and the restoration of some of the building's original elements (such as lighting standards at the entrances, cast iron gates and ornamental metal). The total renovation cost is estimated to be \$14.4 million; the balance of \$2.5 million is expected to be sought in FY 1987 to complete the project. Exterior restoration is scheduled for completion in late 1987.

For the Natural History Building, an amount of \$200,000 is requested in FY 1986 to continue the caulking and repointing of the building's facade. The exterior of the entire building will be recaulked and repointed. A sum of \$250,000 appropriated in FY 1985 is being used to initiate the first phase of the project, and an amount of \$100,000 expected to be sought in FY 1987 will complete this facade work.

An amount of \$400,000 is sought in FY 1986 for roof and skylight repairs at the Freer Gallery Building. Funds are needed for a roof restoration which will be coordinated with the installation of the Quadrangle-Freer cooling tower and roof insulation for greater energy efficiency. Another important part of the roof system is the skylights, which account for about 35 percent of the total roof area. Skylight repairs which include removing glazing, cleaning glass edges and frames, sealing glass perimeters, replacing broken glass, renewing flashing, and cleaning or replacing gutters are needed to eliminate possible future water intrusion.

At the American History Building, the north and south entrances have been a constant and expensive repair problem since the opening of the Museum in the early 1960s. The operating mechanisms of the doors are inside the frames which make them difficult and expensive to repair and parts are not readily available. Frequent breakdowns have damaged and weakened the frames and they must be replaced. Also, the change in the levels of light between daylight and the building's interior is very abrupt, creating visual problems for the visitors as they enter the building. An amount of \$300,000 is requested in FY 1986 for entrance modifications including replacing the frames, doors and transoms; replacing glazing with double-glazed bronze tinted glass to conserve energy and provide an area of light transition for visitors; and raising the light level at the vestibules by upgrading or replacing the existing lighting.

For the Smithsonian Institution Building, a sum of \$200,000 is requested to repaint and caulk a number of deteriorated facade areas which were revealed when the ivy was removed in 1983, and to initiate the first phase of a window replacement project. Most of the 400 windows will be replaced because some have deteriorated frames and sashes and some previous replacements conflict with the architectural style of the building. To conserve energy all windows will be double-glazed. A sum of \$1.56 million is expected to be sought through FY 1990 for this project.

FIRE DETECTION AND SUPPRESSION SYSTEMS (\$1,000,000): The Institution is continuing to upgrade fire protection systems in all buildings to provide a level of safety consistent with today's standards and technology. Work includes the installation of heat and smoke detection systems; sprinkler and chemical suppression systems; fire doors and walls; and the improvement of exit capability, particularly in older buildings. Improved systems also are installed as exhibitions are changed.

For FY 1986, a total of \$1,000,000 is requested to continue the implementation of fire protection master plans at the Natural History Building (\$300,000) and the American History Building (\$300,000); to develop a fire protection master plan for the Air and Space Building (\$100,000); to continue a series of fire protection improvements at the American Art/Portrait Gallery Building (\$100,000); and to accomplish two additional projects: installation of sprinkler systems in the Smithsonian Institution Building (\$100,000); and update the plan for the Arts and Industries Building to accommodate space use changes (\$100,000).

The Natural History and American History Buildings represent the largest areas with the least fire protection, and efforts are being made to correct this major safety deficiency. A fire protection master plan for the Natural History Building was developed in FY 1979, and steady progress has been made since then in carrying out this plan.

With funds appropriated in FY 1979 through FY 1984 (\$2,075,000), construction has been completed on the sprinkler and smoke detection systems for the Natural History Building's west wing; the master fire control panel; and the installation of water supply risers, alarm conduit and wiring required for the east wing. Construction has begun on the installation of the east wing sprinkler and smoke detection systems; sprinklers and smoke detectors for the ground floor, part of the third floor in the main building and the Baird Auditorium and detectors in the west court. Funds of \$500,000 appropriated in FY 1985 will be used to provide emergency public exits from the original building to the east and west wings; to provide fire separation zones between the original building and the east and west wings, and between the original building and the three-story West Court addition; to improve fire protection for woodworking and flammable storage rooms; and to provide safe flammable liquid storage areas in the east and west wings. An amount of \$300,000 is sought in FY 1986 to continue projects begun in FY 1985, and provide new fire alarm pull stations and integrate the smoke detection, sprinkler and alarm systems into the computer system in the master control room. It is expected that an amount of \$1.7 million will be required through FY 1990 to continue the fire protection master plan work in the Natural History Building.

The fire protection master plan for the American History Building outlines phased improvements similar to those under way or planned for the Natural History Building, including upgrading and/or adding sprinkler and detection systems; upgrading the existing emergency power supply and distribution system; upgrading the fire pumps; installing a new fire alarm system; and undertaking architectural modifications to improve the efficiency of fire zones and exit capabilities. With funds of \$1.265 million appropriated in FY 1980 through FY 1984, the fire protection master plan was completed; fire door separations were designed for the first floor; a new ten-inch water main from the street to the building and sprinkler risers throughout the building were designed and installed; electrical trunk lines for smoke detection systems and sprinkler annunciation alarms were

designed and installed; and additional automatic sprinkler and smoke detection systems are being installed throughout two-thirds of the basement level. Funds of \$200,000 appropriated in FY 1985 will continue installation of sprinklers and smoke detection systems in the basement and begin installation of fire protection systems on the fourth floor. For FY 1986, a sum of \$300,000 is sought to continue fire protection work on the fourth floor which includes installing sprinkler systems; removing existing heat detectors; installing smoke detection systems and fire pull stations; and installing an emergency generator. It is expected that an amount of \$2.0 million will be required through FY 1990 to continue the fire protection work in the American History Building.

Over the past several years, some sprinklers and smoke detection systems have been installed in the Air and Space Building in areas considered most vulnerable to fire. In order that a systematic and comprehensive approach be taken, an amount of \$100,000 is requested in FY 1986 to develop a fire protection master plan which will identify the fire protection needs throughout the building. A sum of \$400,000 is expected to be sought through FY 1990 for the implementation of this project.

For the American Art/Portrait Gallery Building an amount of \$100,000 is requested to continue fire protection projects which are being initiated with funds of \$180,000 appropriated in FY 1985. These projects include upgrading emergency exits from the building; installing fire zones; providing emergency lighting; upgrading fire doors; and installing additional smoke detection systems. A sum of \$350,000 is expected to be sought through FY 1988 to complete this project.

With funds appropriated in FY 1983 (\$145,000) and FY 1984 (\$150,000), smoke detector systems were designed and installed in the Smithsonian Institution Building. Funds of \$150,000 appropriated in FY 1985 are being used to install sprinkler systems in the basement and fire-rated partitions throughout the building. For FY 1986, an amount of \$100,000 is sought to continue fire protection measures such as upgrading hardware on emergency door exits and installing sprinkler systems in the center section's attic. An additional amount of \$850,000 is expected to be sought through FY 1990 to continue this project.

An amount of \$100,000 is requested in FY 1986 for the Arts and Industries Building to update the fire protection master plan to include the space use changes which will be recommended by a space utilization study now under way. With funds of \$150,000 appropriated in FY 1982 and FY 1983, smoke detection systems were installed in the pavilions. A sum of \$75,000 appropriated in FY 1985 is being used to install smoke detection systems in the four major exhibit halls. An additional amount of \$300,000 is expected to be sought through FY 1990 to continue this project.

ACCESS FOR THE DISABLED, SAFETY AND SECURITY, AND CORRECTION OF HAZARDOUS CONDITIONS (\$1,060,000): Progress is being made on correcting facility conditions to improve the security of the National Collections, promote improved environmental conditions for the health and safety of visitors and staff, and to provide better access for disabled persons to Smithsonian facilities.

For FY 1986, a total of \$1,060,000 is sought for five projects. To correct hazardous conditions, an amount of \$500,000 is required to continue asbestos removal in the American History Building and in that Museum's Suitland storage buildings. A sum of \$275,000 will be used to complete modifications necessary to accommodate the proprietary alarm system equipment. To accommodate disabled persons, a sum of \$200,000 is needed to continue modifications to the Natural History Building. An amount of \$50,000 will be used to purchase an industrial woodworking exhaust system for the American Art/Portrait Gallery Building; and \$35,000 is needed to replace deteriorated ladders and platforms at the Natural History Building.

The safety and security of collections, visitors and staff necessitate facilities modifications. Major attention will continue to be placed on the containment or removal of asbestos materials located in various Smithsonian facilities. Asbestos has been identified in areas of the American Art/Portrait Gallery Building; the American History Building; the Natural History Building; the Arts and Industries Building; and in a number of buildings at the Suitland Facility. Additional areas contain asbestos, primarily the mechanical equipment rooms in several other buildings. Funds of \$1,150,000 appropriated in FY 1981 through FY 1984 were applied toward the containment and removal of asbestos in the attics, mechanical equipment rooms, skylight areas and exhibit halls of the American Art/Portrait Gallery Building; in the carpentry shop in the Natural History Building; and in the television studio and several basement and third floor areas in the American History Building. Funds of \$400,000 appropriated in FY 1985 are continuing this program of asbestos removal in the American History Building's basement and fourth floor mechanical rooms, and of asbestos abatement in the National Museum of American History's storage Building 19 at the Suitland Facility. For FY 1986, an amount of \$500,000 is needed to continue removing building and duct insulation found to contain asbestos in the mechanical rooms at the American History Building, and at the Museum's Suitland storage buildings. An amount of \$2.0 million will be required through FY 1990 to continue this program.

Another major project under way is the conversion to an electronic security and fire alarm system owned and operated by the Smithsonian. The purposes of converting to a proprietary security system are to gain faster response times to security and fire protection alarms; improve the quality and control of information transmitted from security devices and fire sensors to building security offices and the central control room; and eliminate reliance on leased equipment, outside sources of power and related contractual services, for which costs are escalating rapidly. Current cost estimates for FY 1982 through FY 1986 for the R&R portion of the phased conversion total approximately \$1.575 million. Funds of \$900,000 appropriated in FY 1982 through FY 1984 were used to make necessary building modifications to accommodate permanently installed equipment in the central control room of the Smithsonian Institution Building and of the Museum Support Center. Funds of \$400,000 appropriated in FY 1985 will be used for the modifications needed for the installation of security equipment at the Natural History, Freer Gallery, Smithsonian Institution, American History and Arts and Industries Buildings. A further sum of \$275,000 is requested in FY 1986 to complete modifications at these buildings.

The north and south entrances at the Natural History Building were modified in FY 1980 to improve access for the disabled and improve emergency exit capabilities. With funds of \$200,000 appropriated in FY 1985, Mall entrance gate repairs will be completed and north and south entrance modifications will be made including renovating the west corridor to the Learning Center and repairing, cleaning and finishing all bronze surfaces at the entrances. In FY 1986, a sum of \$200,000 is sought to continue these modifications which will include installing new bronze railings at the entrances; designing and installing guardrails at the South Terrace; and automating the door at the north entrance. An amount of \$280,000 is expected to be sought in FY 1987 to complete this project.

An additional sum of \$85,000 is sought for two health and safety projects. For the American Art/Portrait Gallery Building, \$50,000 is needed for an industrial woodworking exhaust system for the shop areas. Such a system is needed because the exhibits shops' wood and plastic work generates large quantities of particles which are a health and safety hazard. A sum of \$35,000 is required at the Natural History Building to renovate the Rotunda's deteriorated dome ladders and platforms. The existing wooden ladders and platforms will be replaced with lightweight aluminum ones. A nylon safety net also will be installed under the work platforms to protect against potential damages caused by accidental dropping of tools and equipment.

UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS (\$1,745,000): Funds appropriated in this category are used to maintain, repair and upgrade the heating, ventilating and air conditioning systems (HVAC) and plumbing and electrical systems in the Institution's facilities. Proper maintenance and improvements of these systems are essential for increasing energy efficiency and for providing stable temperature and humidity conditions necessary for the preservation of the collections. Scheduled repairs and replacements of deteriorated equipment components require a consistent level of funding, and major renovations and repairs are required in many Smithsonian buildings where utility systems were not designed with the aid of today's energy saving technologies.

The Institution is making a concerted effort to conserve energy as described in the Uncontrollables section of this budget request. The most significant energy savings will be realized by applying substantial resources toward upgrading HVAC systems, replacing obsolete equipment and improving the efficiency of environmental zones. HVAC systems have been modified over the years as the Institution's programs have grown, as the functions of the buildings have changed, and as the environmental needs of the collections have become understood better. Prior to 1972, energy conservation did not represent a primary consideration. An integrated approach now is required in order to plan for long-range, systematic HVAC improvements that will meet museum environmental requirements in an energy efficient manner.

Comprehensive HVAC studies and energy audits have been conducted for most of the buildings in order to assist planning future improvements. The scope of the HVAC studies included field investigations of age, condition and performance of existing equipment, controls and current operating conditions; reviews of existing drawings, specifications, operating manuals and hygrothermograph records; an analysis of the relationship between the building structures and the HVAC systems; and an assessment of programmatic needs for environmental control. The data gathered by these studies are providing a basis for determining redesign or replacement needs of existing HVAC systems; for development of construction cost estimates or revision of previous cost estimates; and for establishment of priorities for the repair, replacement or modification of such equipment components as air handling units, chillers, condensers, compressors, cooling towers, automatic temperature and humidity controls, pumps, pipes, fans, filters, ductwork and related electrical and plumbing systems. At the same time, energy audits are being performed to investigate all factors relating to energy use, such as power-consuming equipment and building conditions (doors, windows, insulation, floors and partitions). Current energy consumption and costs are being evaluated; energy conservation opportunities are being identified; projected savings are being calculated; and plans are being developed to carry out recommended energy conservation measures.

For FY 1986, a total of \$1,745,000 is requested for utility systems repairs and improvements. The major portion of this request, \$1,335,000, is designated for comprehensive projects to upgrade heating, ventilation and air conditioning systems at the American History Building (\$1,000,000), the Natural History Building (\$235,000), and the Arts and Industries Building (\$100,000). To implement recommendations resulting from an energy conservation study, \$100,000 is required to replace deteriorated windows and frames at the Cooper-Hewitt Museum. An amount of \$250,000 is sought to prepare several buildings for communication cables that will permit the operation of various computer systems; and a sum of \$60,000 is required to install an emergency generator at the Smithsonian Tropical Research Institute (STRI).

At the American History Building, a comprehensive HVAC study initiated with \$100,000 appropriated in FY 1981 was completed in 1982. Additional monies appropriated in this category between FY 1981 and FY 1984 (\$1,285,000) were used to replace 12 deteriorated air handling units and a cooling tower. An amount of \$1.8 million appropriated in FY 1985 will be used to prepare drawings and specifications for the first phase of HVAC renovation based on the study findings and to begin implementation of the design.

Difficulty in maintaining necessary environmental conditions is due, in part, to the age and construction of the building and the age and design of the HVAC system and its controls. The study findings indicate upgrading the mechanical system is necessary to bring the system up to acceptable museum standards of operating efficiency and reliability. Other related projects recommended in the study include caulking and weather-stripping windows and doors; shading and sunscreening windows; ceiling and wall improvements; window replacements; and installation of a central control and monitoring system. An amount of \$1,000,000 is sought in FY 1986 to continue renovating the HVAC system and to continue replacing windows. An amount of \$4.8 million is expected to be sought through FY 1990 to continue this project.

The Natural History Building houses 84 million specimens in reference collections and also has a wide array of public exhibits that attract millions of visitors annually. The physical limitations of the building, and the age, type and deteriorating condition of the HVAC systems, refrigeration equipment and controls make it impossible to maintain the environment required for the preservation of the Museum's collections and exhibits. In April 1983, an environmental control and energy conservation study was completed. The study findings suggest that the air cooling units, central return air and exhaust fan systems be replaced with a centralized air system to be located in new penthouses over the east and west wings for energy efficiency, cost effectiveness and systems reliability. Other improvements recommended include wall vapor barriers; roof insulation; replacement of single-glazed windows with double-glazed windows; entrance and exit door modifications; air locks on loading docks; centralization of laboratories with new exhaust systems; new air conditioning units for the Rotunda and attics; cabinet shop dust collection systems; West Court utility systems improvements; automatic temperature control system improvements; replacement of chillers; and a central control and monitoring system. The total cost of these recommendations is estimated to be \$54.5 million. These recommendations are being evaluated and reconciled to ensure consistency with program objectives. An amount of \$235,000 is sought in FY 1986 to begin the preparation of design and specifications for this work. A sum of \$16.8 million is expected to be required through FY 1990 to continue this project.

An environmental control and energy conservation study of the Arts and Industries Building was completed in 1981. The findings indicate that the physical limitations due to construction of the building, coupled with the age, type and location of the HVAC equipment make it impossible to maintain the proper environment required for preservation of the museum collections in the building. An amount of \$100,000 is requested in FY 1986 to begin implementation of the study recommendations which include upgrading the HVAC systems and controls; construction of a new floor for a machine room; removal and relocation of the existing computer center; installation of new ceilings; and installation of vapor barriers. An amount of \$9.8 million is expected to be sought through FY 1990 to continue this project.

A major requirement identified in an energy conservation study for the Cooper-Hewitt Museum is replacing the Carnegie Mansion's deteriorated windows and frames. The Mansion is a landmark site and the new windows will duplicate the existing design. The wood sashes and frames will be replaced and the windows glazed with insulating glass incorporating factory-bonded ultraviolet film. An amount of \$300,000 appropriated in FY 1985 is being used to begin this project. A further amount of \$100,000 is sought in FY 1986 to begin to replace all windows on the first and second floors on the north, west and south facades. An additional amount of \$3.2 million is expected to be required through FY 1990 to continue implementing the energy conservation study and related preservation recommendations.

The Institution has established a coordinated program to apply office automation advances in all of its facilities and to provide access to data base management systems. The number of users of terminals and office automation equipment is expected to grow at

the rate of 100-200 users per year. Funding for office automation equipment is sought in the Salaries and Expenses portion of this budget request. To be used efficiently and effectively, this equipment must be interconnected. Presently, a large number of devices are in use which would benefit from interconnection. These include word and data processing terminals, personal computers and telecommunications equipment. A research computer-based system is operating which has over 50 connections and a computer-based security and fire protection system is being installed in Washington, D.C. area facilities. Over the next ten years, additional computer systems and electronic services will be needed including sensing systems for energy management; an expanded telephone system; telexes and facsimile devices; cabling for computer automation terminals and printers; protected electrical supplies for computer and office automation systems; and video systems for exhibits and education. The cost and management problems associated with separately installing these electronic services in each building, coupled with the requirement that most services link buildings on The Mall, led to coordinated planning efforts among the various offices responsible for each system. The result of this planning was a decision to install a common communications pathway system or master raceway system in the Mall area. Plans call for installation to begin in FY 1986 of a raceway system within and between eight buildings in the Mall area which will accommodate future electronic requirements. It will be a single, in-ground, multipurpose conduit system capable of housing wires and cables for all electronic services within and between the Smithsonian Institution, Arts and Industries, Freer Gallery, Hirshhorn, Air and Space, American History and American Art/Portrait Gallery Buildings. For FY 1986, an amount of \$250,000 is sought to initiate the first construction phase which consists of interconnecting the Mall buildings using four-inch conduits encased in concrete. An additional amount of \$9.5 million is expected to be sought through FY 1990 to continue the first phase and to begin the second construction phase which will consist of extending the raceway into each building and branching the system through floors, walls and ceilings to work stations, offices or exhibit areas.

For FY 1986, an additional amount of \$60,000 is sought for the Smithsonian Tropical Research Institute in Panama for an emergency generator on Barro Colorado Island. Currently, the Island does not have a reliable back-up power source.

OTHER PROJECTS (\$7,995,000): Projects in this category support the maintenance and development of the Institution's outlying facilities and other projects designed to meet programmatic objectives in the areas of research, collections management and exhibitions. For FY 1986, a total of \$7,995,000 is sought for the following projects:

(\$000s)

<u>FACILITY</u>	<u>PROJECT DESCRIPTION</u>	<u>AMOUNT</u>
Suitland Facility	Master plan	\$ 130
Suitland Facility	Building 17 modifications	500
Air and Space Building	Space modifications	50
Arts and Industries Building	Relocation of space/functions	300
Arts and Industries Building	Space improvements	300
Freer Gallery Building	Basement renovations	2,000
Freer Gallery Building	Courtyard excavation/construction	2,500
American History Building	Miscellaneous space modifications	50
Smithsonian Tropical Research Institute	Master plan	130
Smithsonian Tropical Research Institute	Conference/Dining Facility	665
Smithsonian Tropical Research Institute	Naos Island Dormitory	415
Smithsonian Tropical Research Institute	Gamboa Dormitory	220
Hirshhorn Gallery Building	Master plan	75
Whipple Observatory	Master plan	60
Whipple Observatory	Communication Link	200
Natural History Building	Libraries space modifications	200
Miscellaneous	Advanced planning and design	200
		<u>\$ 7,995</u>

-- Suitland Facility - (\$630,000)

The Suitland Facility has grown over the years. It is a collection of prefabricated (Butler) buildings which house storage and conservation functions of the National Museum of American History, the National Museum of Natural History and the National Air and Space Museum. Increasing utility needs, new space requirements and problems with surface drainage indicate the need for a carefully planned program for growth. The National Capital Planning Commission has recommended that the Institution develop a master plan for the 100-acre tract to provide for future use and improvement of the available land. An amount of \$200,000 appropriated in FY 1985 will be used to begin development of a master plan which will include surveys of existing conditions, projected program requirements for the Facility, the impact of the Museum Support Center, and long-range development of the entire 100-acre site. In FY 1986, a sum of \$130,000 is sought to continue the development of the master plan. An additional amount of \$200,000 is expected to be sought in FY 1987 to complete this project.

For the National Museum of American History, an amount of \$500,000 is requested in FY 1986 for the design and renovation of collection storage Building 17. Improvements will include roof repairs; installation of smoke detection and sprinkler systems; removal and replacement of electrical wiring and fixtures; new walls and roof insulation; interior painting; removal of asbestos; and removal and upgrading of space heaters. This building will contain objects from the collection such as farm implements, printing presses, motors, transformers and dental chairs which do not require museum quality environmental conditions. These improvements are an essential element of the Museum's collection management/inventory program in that they will provide a safe and secure area for a portion of the collection.

-- National Air and Space Museum - Space Modifications - (\$50,000)

An amount of \$50,000 is requested in FY 1986 to design and to begin implementation of space improvements at the Air and Space Building. Over the past eight years, the Museum has experienced growth in its research programs as well as curatorial, exhibits and educational activities. Plans call for reconfiguring areas on the third floor to create more functional and efficient office areas. An additional sum of \$50,000 is expected to be sought in FY 1987 to complete this project.



-- Arts and Industries - (\$600,000)

At the Arts and Industries Building (A&I), a major renovation of the facade and roof has been under way since 1982. An amount of \$300,000 is sought in FY 1986 to construct temporary work areas to accommodate functions and activities presently located in the Arts and Industries Building which must be relocated within the Building and to other buildings due to the ongoing roof and facade work. Activities expected to be relocated include the computer center, which occupies two floors of the area to be renovated. An additional amount of \$500,000 is expected to be sought in FY 1987 for these relocations.

A comprehensive space study of the Arts and Industries Building is now being conducted. The study will evaluate existing space use and investigate future needs. In addition to recommending space improvements, the study is focusing on activities located in the Mall area that could be relocated to the A&I Building. An amount of \$300,000 is requested in FY 1986 to begin construction of permanent building alterations based on the study findings. An additional amount of \$2.0 million is expected to be requested through FY 1990 to continue this project.

-- Freer Gallery Building - (\$4,500,000)

A total sum of \$4.5 million is sought in FY 1986 for the Freer Gallery of Art to create critically needed space, mainly for storage and conservation of the collections. For the past two decades, the Freer has been exploring the possibility of acquiring additional space through construction while at the same time expanding into corridors, attic spaces and the sub-basement, and increasing the density of collections storage and work space. The terms of the Freer bequest, which stipulate that the Freer collections not leave the Freer building except during renovation, prohibits long-term off-site storage. With the siting of the Freer and the present construction of the Sackler Gallery to the east, the only remaining possibility is to construct space underground.

While the construction of the Sackler Gallery relieves some strains on Freer space, it by no means resolves all of them. Although many of the behind-the-scenes operations of the Freer (administration, curatorial, cabinet shop, library, registration and photographic laboratory offices) will be relocated in the Sackler Gallery building, the Conservation Laboratory and the Oriental Art Restoration Studio will remain and plans call for both to expand and modernize in the west end of the building. These two facilities will, in fact, quadruple their space from the existing area of 2,175 square feet to 8,400 square feet. This massive growth is necessitated by the greatly increased level of activity anticipated with the acquisition of the 1,000 piece Sackler collection which will require conservation work before exhibition. In addition, traveling exhibition objects, both incoming and outgoing, will require conservation attention. The additional space will also permit an expanded training program in both traditional and Western techniques of conservation treatment of Asian art objects.

Sackler construction still will not alleviate the crowded collection storage problems of the Freer collection. The Freer currently has about 7,000 square feet of storage space including areas in the attic which provide supplementary storage space for Pawabic pottery and other pieces. Corridors and office areas are used to store furniture. Paintings storage is over-flowing; pottery storage and lacquerware have objects dangerously close together, and textiles are too tightly stored. An ideal opportunity to correct this deficiency arises in conjunction with the already planned excavation of one-third of the Freer's courtyard for construction of the tunnel which will link the Freer Gallery with the Sackler Gallery, a project included within the Quadrangle construction budget. Renovation of the Freer basement and excavation of the remaining two-thirds of the court-yard to a two-level depth would increase Freer collection storage space by 43 percent, to 10,000 square feet, and 3,200 square feet of additional exhibition space

would be created (12 percent addition to existing gallery space) to provide gallery space where visitors from the Sackler Gallery would first enter the Freer Gallery. The remaining available space would be used for exhibition prop storage and staging, conference and teaching rooms, general receiving, custodial storage, staff locker facilities, and other programs. (Total area recovered will be 13,000 square feet.) Fire protection, security, and heating, ventilating and air conditioning systems will meet the particular environmental conditions required by each area.

For FY 1986, an amount of \$2.0 million is sought for the design and renovation of the Freer basement. The tunnel connection from the Sackler Gallery to the Freer Gallery, funded within the Quadrangle budget, requires excavating approximately one-third of the area beneath the existing Freer courtyard. A further amount of \$2.5 million is requested for FY 1986 for the excavation, underpinning and construction of a structural shell for the remaining two-thirds of the area. Additional funds of \$2.5 million will be sought in FY 1987 to complete the development of this newly constructed underground space.

Construction costs include necessary underpinning of the Freer structure and the projected excavation which must be done incrementally in order to avoid structural damage to this landmark building. There is a strong cost incentive to accomplish this project beginning in FY 1986. The Freer already is scheduled for underpinning and excavation for part of the courtyard as a part of the Quadrangle link. Therefore, this work represents a one-time opportunity to take advantage of other ongoing work of a similar character.

At the outset of the courtyard excavation project, the existing top layer of the courtyard of the Freer Gallery of Art will be removed and stored temporarily at another location. Upon completion of the construction, the existing courtyard plantings and fountain will be replaced.

-- National Museum of American History - Space Modifications - (\$50,000)

Activities relocated to the Museum Support Center formerly occupied space in the basement of the American History Building. Space reconfigurations and modifications must be made to the basement to meet the requirements of other activities moving into these vacated areas. Improvements also are required for activities which will remain in the basement but are housed in inadequate spaces. An amount of \$50,000 is sought in FY 1986 to initiate these modifications. A sum of \$400,000 is expected to be sought through FY 1990 to continue this project.

-- Smithsonian Tropical Research Institute - (\$1,430,000)

Master Plan (\$130,000):

For the Smithsonian Tropical Research Institute (STRI) in Panama, an amount of \$130,000 is sought in FY 1986 to complete the development of a master plan initiated with funds of \$75,000 appropriated in FY 1981 and FY 1982. A sum of \$120,000 appropriated in FY 1985 is being used to continue development of this plan. When completed, it will establish comprehensive program requirements, identify facilities' needs and provide information that will assist in future facilities development.

Barro Colorado Island Conference/Dining Facility - (\$665,000):

Barro Colorado Island (BCI), located in the Gatun Lake, serves as the principal site for terrestrial research at STRI. Representing the only piece of lowland, moist forest under U.S. custodianship, the island has attracted thousands of international researchers since its establishment in 1923. The data base which has been amassed over the years makes BCI the most studied piece of tropical real estate in the world. The importance of

BCI as a research center is corroborated by the fact that present dormitory and dining facilities are inadequate to meet the demands of the present staff, and long- and short-term visitors, so that worthy applicants must be turned away.

An amount of \$665,000 is sought in FY 1986 to construct a two-story, 2,700 square foot conference/dining facility on Barro Colorado Island. The existing 50-year old wooden frame building is in poor condition, does not meet sanitary standards, and can only accommodate the serving of 135 meals a day. The new building will have a dining room on the first floor, offering safe and sanitary conditions, and allow for service of 240 meals a day. The second story above the dining room will be a multi-purpose room providing space for lectures, symposia and conferences which are significant parts of the intellectual life at Barro Colorado Island.

#### -- Dormitories at Naos Island and at Gamboa:

STRI is one of the largest organizations in the world devoted to basic research on the ecology, evolution and behavior of tropical ecosystems. A staff of 26 professionals maintains an active research program including collaborative efforts each year by some 1,300 visiting scientists and students representing more than 200 institutions worldwide. STRI and visiting scientists and students are conducting joint studies that bear directly on natural resource issues in the tropics. To assure the continuation of collaborative research efforts, it is essential that visiting scientists and students have access to suitable housing at or near research and laboratory locations. Consequently, an amount of \$635,000 is requested in FY 1986 to construct a dormitory on Naos Island (\$435,000) and to renovate existing apartments at Gamboa (\$200,000). No local housing is otherwise convenient or economically available at these sites.

#### Naos Island Dormitory

For FY 1986, an amount of \$415,000 is sought to construct a two-story dormitory on Naos Island that would accommodate 10 visiting scientists. STRI's Naos marine laboratory is situated at the end of a long artificial causeway, and is bordered on one side by the Pacific entrance to the Panama Canal and on the other side by the Bay of Panama. Its location, not accessible by public transportation, is several miles away from areas in which STRI housing is available. Because marine scientists have irregular work schedules that are based on shifting tide cycles, they require accommodations that are near their work sites. An on-site dormitory would enhance research productivity. The proposed dormitory would replace several structures, located approximately five miles from Naos near STRI's administration building in Panama City. These structures are being returned to the Panamanian Government under the terms of the Treaty. Major modifications to existing water and electricity services would not be necessary, but an independent sewage processing and disposal system would be essential. The cost of such a system is included in the amount sought.

#### Gamboa Dormitory

An amount of \$220,000 is requested for FY 1986 to renovate an apartment building at Gamboa. Development of a dormitory at Gamboa would serve several purposes. Gamboa is located near Barro Colorado Island and provides easy access to several field sites, including a 54,000-acre National Park of great importance for scientific research. Thus, the availability of housing in Gamboa would relieve pressure for quarters on Barro Colorado Island and at the same time establish a base for research on habitats and species that are not available on BCI.

The building which will be renovated was built to accommodate eight bachelor apartment quarters. It consists of a ground floor with enclosed garages and two upper floors with four apartments per floor. At present, it has damage to doors, walls, ceilings and

floors. The renovations will result in eight double apartments with basic facilities, including a kitchenette in each apartment and a self-service laundry area.

-- Hirshhorn Museum and Sculpture Garden - Master Plan - (\$75,000)

The Museum's collection has doubled in size as a result of the Hirshhorn bequest. Although additional space is needed to accommodate these works, a shortage of space already exists for many of the Museum's activities. Functional areas which require additional or modified space include exhibits, storage, laboratories, training, rest rooms, and the auditorium to improve access. An amount of \$75,000 is sought in FY 1986 for a space use master plan to assist the Museum in making better use of existing space and in developing new space within the boundaries of the Museum site. An additional amount of \$125,000 is expected to be sought in FY 1987 to complete this project.

-- Smithsonian Astrophysical Observatory, Whipple Observatory - (\$260,000)

For FY 1986, an amount of \$60,000 is sought to complete the base camp master plan for the Whipple Observatory initiated with funds of \$40,000 appropriated in FY 1984. The existing base camp, a former county school leased by SAO that is located approximately 18 miles from the Multiple Mirror Telescope on the summit of Mt. Hopkins, is functionally obsolete and overcrowded. The new base camp will provide more efficient administrative and support facilities for the major astronomical facility. The complete master plan will provide: documentation of existing conditions; identification of future space and facility requirements; a site selection study; a plan to assist in the development of base camp facilities; a cost analysis; and an environmental statement.

An amount of \$100,000 appropriated in FY 1985 will be used to begin construction of a communication system for the Whipple Observatory which will consist of: two microwave links connecting the present base camp at Amado, Arizona, to the Mt. Hopkins summit and the summit to Tucson, Arizona; and private phone systems in Amado, on the mountain and in Tucson. Due to the geographical location of the Observatory, improved communications are critical to its efficient operation. Changes in astronomical data collection techniques, travel costs and government deregulation of the communication industry necessitated review of the Observatory's present communication system. As a result, it has been determined that a new communication system will be more cost effective and enhance the use of the telescopes. The Observatory has pioneered a system of remote observing where data are taken by a resident technician, using computers, for the astronomers. This system is viable scientifically only so long as the astronomers can spot-check the data frequently as soon as they are recorded by computers. The slow rate at which the Observatory now can transmit spot-check data over the existing phone lines is a major problem. The proposed system will increase the rate of transmission by a factor of 100 and will make remote observing more effective. For the astronomers in Tucson, the final data will be available immediately for analysis. The new communication link will interconnect the Observatory's computers which will increase operation efficiency, reduce travel costs and time, and allow for long distance trouble-shooting of equipment problems. An additional amount of \$200,000 is sought in FY 1986 to continue construction of the communication system. A sum of \$75,000 is expected to be sought in FY 1987 to complete this project.

-- Smithsonian Institution Libraries - Space Modifications - (\$200,000)

With funds of \$200,000 appropriated in FY 1980, the first renovation phase was completed for space modifications of the Smithsonian Institution Libraries located in the Natural History Building. Reader services areas are being renovated with funds of \$165,000 appropriated in FY 1984. Funds of \$230,000 appropriated in FY 1985 will be used to modify the central library processing areas including central reference, binding, gifts and exchange, and shipping and receiving. The renovation of the Natural History library

branch also will begin. An amount of \$200,000 is sought in FY 1986 to continue these space modifications. This work will include completing the renovation of the Natural History library branch including the purchase and installation of a compact library shelving system, and space modifications for the administrative, cataloguing and program office areas in the northeast section of the library. An additional amount of \$215,000 is expected to be sought in FY 1987 to complete this project.

-- Advanced Planning and Design Funds - (\$200,000)

For FY 1986, an amount of \$200,000 is requested for both advanced planning and advanced design of projects in all subaccounts within the Restoration and Renovation of Buildings account. For the majority of the R&R projects, particularly projects which are not phased and require only one-year funding, the project request includes funds for planning, design and construction. The planning and design stages require approximately ten percent of the project's funds, but may take from one to twelve months to complete depending upon the project's complexity. Construction costs escalate at a rate of one-half percent per month, so that six percent of a project's construction funds could be lost in one year. Advanced planning and design funding will enable the Institution to develop better cost estimates and to contract for construction as soon as the R&R appropriation is received. Funds of \$200,000 appropriated in FY 1985 are being used for these purposes. An additional amount of \$1.6 million is expected to be sought through FY 1990 for advanced planning and design work.

RESTORATION AND RENOVATION OF BUILDINGS  
 PLANNED PROGRAM  
 FY 1985 - FY 1990

	FISCAL YEARS						Total FY 1986-90
	1985	1986	1987	1988	1989	1990	
(Dollars in thousands)							
GENERAL REPAIRS AND IMPROVEMENTS	545	475	2,530	900	1,660	610	6,175
FACADE, ROOF AND TERRACE REPAIRS							
American Art/Portrait Gallery Building							
-Repair Stone Facade	150		75				75
Anacostia Neighborhood Museum							
-Exhibits Laboratory Roof	200						
Arts and Industries Building							
-Roof and Exterior Renovations	2,500	1,500	2,500				4,000
Cooper-Hewitt Museum							
-Roof Repairs - Mansion				50			50
Freer Gallery Building							
-Roof & Skylight Repairs		400					400
Hirshhorn Museum							
-Plaza Resurfacing				1,500			1,500
National Air and Space Museum							
-Facade Repairs			100	200	200	200	700
-Roof Repairs			250	4,500	300	300	600
-Replace Plaza Surface							4,750
National Museum of American History							
-Roof Replacement - Design and Construction	710						
-N & S Entrance Doors Replacement		300					300
-Terrace Repair - Ramp Removal/Install Glass					925	1,000	1,925
-Fountain Renovation - Planning and Design					175		175
National Museum of Natural History							
-Caulk & Point Facade	250	200	100				300
-Roof Replacement - Design and Construction				1,000	1,000	1,000	3,000
Renwick Gallery							
-Facade Renovation and Window Replacement	500						
-Roof Repairs					50		50
Smithsonian Environmental Research Center							
-Roof Repairs	90						
Smithsonian Institution Building							
-Caulk and Point Facade/Window Replacement		200	660	300	300	300	1,760
-Replace Facade Stone	50						
Suitland Facility							
-Exterior Maintenance - NASM Bldgs. 20 & 24			60				60
Subtotal, Facade, roof and terrace repairs	4,450	2,600	3,745	7,500	3,000	2,800	19,645

RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM  
FY 1985 - FY 1990

	<u>FISCAL YEARS</u>						<u>Total</u> FY 1986-90
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	
<b>FIRE DETECTION AND SUPPRESSION SYSTEMS</b>							
American Art/Portrait Gallery Building			150				150
-Install Public Address System		100	220	130			450
-Fire Protection	180						
Arts and Industries Building			75	75	75	75	400
-Fire Protection	75	100	75	75	75	75	
Freer Gallery Building							
-Install Public Address System					100		100
Hirshhorn Museum							
-Sprinkler Systems - Mechanical Rooms			105				105
National Air and Space Museum							
-Kitchen Ceiling Sprinklers	20						
-Fire Protection		100	100	100	100	100	500
National Museum of American History							
-Replace Ten Stairwell Doors	100				25		25
-Upgrade Public Address System	200		500	500	500	500	2,300
-Fire Protection Master Plan		300					
National Museum of Natural History							
-Fire Protection Master Plan	500	300	500	400	400	400	2,000
Renwick Gallery							
-Basement Sprinkler System	80						
Smithsonian Institution Building							
-Fire Protection	150	100	250	200	200	200	950
Smithsonian Tropical Research Institute							
-Fire Protection - BCI			75				75
Suitland Facility							
-Fire Protection NMAH Bldgs. 19,A,B,C,D	160		250	100	100		450
<b>Subtotal, Fire detection and suppression systems</b>	<b>s 1,465</b>	<b>1,000</b>	<b>2,225</b>	<b>1,505</b>	<b>1,500</b>	<b>1,275</b>	<b>7,505</b>

RESTORATION AND RENOVATION OF BUILDINGS  
 PLANNED PROGRAM  
 FY 1985 - FY 1990

	FISCAL YEARS					Total FY 1986-90	
	1985	1986	1987	1988	1989		1990
<b>ACCESS FOR THE DISABLED, SAFETY AND SECURITY AND CORRECTION OF HAZARDOUS CONDITIONS</b>							
Access for the Disabled - Various Buildings			120	200	160	125	605
American Art/Portrait Gallery Building		50					50
-Shop Dust Abatement					20		20
-Building Accessibility Study	50						
-Upgrade Exterior Security Lighting			50	35	35	65	185
-Tile Replacement - Great Hall					55		55
Anacostia Neighborhood Museum			500	500	500	500	2,500
-Install Elevator to Second Floor	400						
Asbestos Abatement							
Cooper-Hewitt Museum			45				45
-Emergency Generator			150	400			550
Emergency Power Study/Design							
Hirshhorn Museum							
-New Rest Room Construction					75		75
-Six Minor Safety/Security Projects			60				60
-Sculpture Garden Paving					35		35
Mall Security Lighting			200	200	200	200	800
National Air and Space Museum							
-Replace Entry Door Grates			125				125
-Emergency Telephone and Lighting System			260				260
-Replace Garage Ramp Snow Melters			70	70			140
National Museum of American History							
-Security Barriers, Collection Storage Areas			10				10
-Fourth Floor Security					80		80
National Museum of Natural History							
-New Interior Handrails			150				150
-Dome Access Modifications		35					35
-N & S Entrance Modifications	200	200	280				480
Proprietary Alarm System	400	275					275

(Dollars in thousands)



RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM  
FY 1985 - FY 1990

	<u>FISCAL YEARS</u>					<u>Total FY 1986-90</u>
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	
(Dollars in thousands)						
ACCESS FOR THE DISABLED, SAFETY AND SECURITY AND CORRECTION OF HAZARDOUS CONDITIONS (continued)						
Renwick Gallery						
-Security - Electrical Wiring	20		50			50
-Emergency Lighting					50	50
Smithsonian Institution Building						
-South Tower Egress			170			170
-Convert Elevator #5			150			150
Smithsonian Tropical Research Institute						
-Petroleum Storage Facility - BCI				25		25
Suitland Facility						
-Perimeter Road/Repair Security Fence				50		50
-Building 10 Addition for Chemical Cleaning					200	200
-Standby Emergency Generator	<u>60</u>					
Subtotal, Access, safety and security	1,130	1,060	2,390	1,455	1,435	890
						<u>7,230</u>

RESTORATION AND RENOVATION OF BUILDINGS  
 PLANNED PROGRAM  
 FY 1985 - FY 1990

	FISCAL YEARS					Total FY 1986-90
	1985	1986	1987	1988	1989	
<b>UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS</b>						
American Art/Portrait Gallery Building					50	50
-Electrical and Plumbing Repairs				1,000	4,500	5,900
-HVAC Renovation						
Arts and Industries Building	20					
-Plumbing Repairs						
-HVAC Renovation/Energy Conservation		100	500	2,800	3,500	3,000
-Tunnel Renovation	150					
Cooper-Hewitt Museum						
-HVAC Renovation/Window Replacement	300	100	825	600	800	1,000
-Utility Systems Study - Miller House			35			35
Hirshhorn Museum						
-Energy Study/Implementation			600	400		1,000
Mall Master Raceway		250	500	3,000	3,000	3,000
National Air and Space Museum						
-Energy Conservation	250		500	300	300	300
-Replace Reheat Coils	50		150	50		200
National Museum of American History						
-Upgrade Simplex System			200			200
-HVAC Renovation/Energy Conservation	1,800	1,000	1,800	1,000	1,000	5,800
National Museum of Natural History						
-Relocate Sewage Line - West Court			150			150
-HVAC Renovation/Energy Conservation		235	400	3,000	6,200	7,200
-Tunnel Renovation				50	50	150
Renwick Gallery						
-Install Public Address System			200	1,000	50	50
-Energy Study/Implementation						
Smithsonian Environmental Research Center						
-Utility Improvements			30	30	30	30

RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM

FY 1985 - FY 1990

	FISCAL YEARS					Total FY 1986-90
	1985	1986	1987	1988	1989	
<b>UTILITY SYSTEMS REPAIRS AND IMPROVEMENTS (continued)</b>						
Smithsonian Institution Building						
-New Lighting - Great Hall and Lounge				750		750
-Electrical Wiring Renovation	60					140
-Utility System Study/Implementation		40	100			45
Smithsonian Tropical Research Institute						
-Communications Structure			110			110
-Standby Generator - Naos		60				60
-Emergency Generator - BCI			75			75
-Upgrade Water and Sewage Systems - BCI			20			20
-Upgrade Sewage System - Galeta						
Suitland Facility						
-Electrical Upgrade - Bldgs. 7, 22, 23				40		40
-HVAC Upgrade - Bldgs. 22 & 23				100		100
Whipple Observatory						
-Summit Power Line			50			50
-Communications Link	100					
Subtotal, Utility systems repairs and improvements	2,730	1,745	6,185	13,330	20,665	17,730
						59,655

RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM  
FY 1985 - FY 1990

	<u>FISCAL YEARS</u>					<u>Total</u> FY 1986-90
	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	
(Dollars in thousands)						
OTHER PROJECTS						
Advanced Planning and Design	200	200	350	400	400	1,750
American Art/Portrait Gallery Building						
-Building Renovation, Design and Construction			500	2,000	1,000	4,500
Anacostia Neighborhood Museum						
-Lab Annex - Design and Construction	400			100	250	350
-Master Plan - Poplar Point						
Arts and Industries Building						
-Space Modifications - Space Study		300	500	500	500	2,300
-Space Modifications - Facade Renovations		300	500			800
Cooper-Hewitt Museum						
-Space Modifications - Attic			25	250		275
Day Care Center			450			450
Freer Gallery Building						
-Basement Renovations		2,000				2,000
-Courtyard Excavation/Construction		2,500	2,500			5,000
Greenhouse/Nursery Master Plan & Construction			150		4,000	4,150
Hirshhorn Museum						
-Master Plan		75	125			200
National Air and Space Museum						
-Space Modifications		50	50			100
National Museum of American History						
-Mezzanine above First Floor			320			320
-Conservation Lab Improvements			300			300
-Space Modifications		50	100	100	100	450
-Relocate Security Office	125					
-Object Processing Lab Improvements			15			15
-Relocate Space/Functions - HVAC Related			500			500
National Museum of Natural History						
-S.I. Libraries - Space Modifications	230	200	215			415
-Space Modifications/Improvements			500	500	500	2,000
Renwick Gallery						
-Space Use Study - Basement			40			40

RESTORATION AND RENOVATION OF BUILDINGS  
PLANNED PROGRAM

FY 1985 -- FY 1990

	FISCAL YEARS						Total FY 1986-90
	1985	1986	1987	1988	1989	1990	
(Dollars in thousands)							
OTHER PROJECTS (continued)							
Smithsonian Environmental Research Center							
-Calf Barn Modifications			30				30
-Master Plan and Design	185		300				300
Smithsonian Institution Building							
-Master Plan, Design and Implementation			50	100	100	100	350
Smithsonian Tropical Research Institute							
-Design/Construction New Dormitories - BCI	895						
-Dining/Conference Facility - BCI		665					665
-Master Plan	120	130					130
-Dormitory Construction - Naos Island		415					415
-Dormitory Renovation - Gamboa		220					220
Space Modifications - Various Buildings			500	500	500	500	2,000
Suitland Facility							
-Master Plan	200	130	200				330
-NMAH Building 17,19,A,B,C,D Modifications	500	500	750	250	250	70	1,750
-OPLANTS Maintenance Building							70
-Exhibits Storage Building - NASM			670				670
Whipple Observatory							
-Master Plan - Base Camp		60					60
-Standby Generator Building			100				100
-Ridge Dormitory/Design and Construction			40				40
-Communications Link		200	75				275
-Design Administration Building	40						
-MMT Support Building and Aluminizing Shop	260						
Subtotal, Other projects	3,155	7,995	9,855	4,700	3,600	7,170	33,320
GRAND TOTAL - Restoration and Renovation of Buildings	13,475	14,875	26,930	29,390	31,860	30,475	133,530

CONSTRUCTION

Quadrangle

FY 1986 Estimate.....	\$8,000,000
Appropriated.....	\$4,000,000
Nonappropriated.....	\$4,000,000

In FY 1986, construction of the Quadrangle building is expected to be complete with the exception of the connecting link and modifications in the Freer Gallery that will provide a passage for public and staff between the two buildings. The Quadrangle will include two small, above ground entrance pavilions bordering Independence Avenue which will serve as introductory galleries. Below ground, there will be exhibition galleries and supporting museum facilities for display of unique collections of the National Museum of African Art and for collections of Near and Far Eastern Art to be displayed in the Arthur M. Sackler Gallery. The new exhibition galleries will permit the Institution to present a variety of exhibitions drawn from the collections of its own museums, other United States collections, as well as loans from abroad.

Additional areas in the Quadrangle building, reached by a small, above ground kiosk will house the Smithsonian Institution Traveling Exhibition Service, the Resident Associate and National Associate Programs, expanded public education facilities and an International Center that will coordinate and enhance the Institution's international programs for the purpose of special exhibitions, symposia, and special studies.

Schedule - Public opening of the Quadrangle, including inaugural exhibitions of the National Museum of African Art and the Sackler Gallery, is planned for the spring of 1987, although there will be considerable activity prior to opening. The Institution anticipates beneficial occupancy of the lower (third) level in February 1986. Relocation of organizations to be housed on this level will begin shortly thereafter. These organizations include SITES, Resident Associate and National Associate Programs, and the International Directorate including the International Center and the Office of Service and Protocol; the Office of Publications Exchange will remain at the SI Service Center. It also is anticipated that the building will be substantially complete in April 1986, with relocation to the Quadrangle of the National Museum of African Art and the establishment of the Sackler Gallery to begin in June. Between June 1986 and the spring of 1987, preparations will take place for inaugural exhibitions and other events. A proposed budget obligation plan to support this schedule is provided as part of this justification.

Budget History - Public Law 96-36, signed by the President on July 20, 1979, authorized planning for the development of the Quadrangle. In FY 1982, \$960,000 was appropriated to complete planning and design for a Center for African, Near Eastern and Asian Cultures within 4.2 acres of land bounded by the Smithsonian Building, the Arts and Industries Building, the Freer Gallery of Art, and Independence Avenue. To meet the \$37,500,000 to be provided by the Smithsonian, a matching amount of \$36,500,000 was appropriated in FY 1983 to allow the Institution to construct a building in the Quadrangle.

Based on very favorable bids, the Quadrangle construction contract that was awarded by the General Services Administration suggested a project budget totaling \$16,000,000 less than anticipated. Consequently, the Congress rescinded the Federal share, or \$8,000,000, from the construction appropriation in FY 1984. Legislative language accompanying this reduction confirmed a continuing commitment from Congress to share equally in the funding of the project and provided for the Institution to request future amounts as necessary to complete this major initiative.

Project Cost - Subsequent to the acceptance of the current construction contract in 1983, the Institution prepared detailed cost estimates for security equipment, furniture and equipment for public, administrative and shop areas. Costs for these items were not included in the original construction project estimates which totaled \$75,000,000. Rather, it had been assumed that they would be sought separately within the Salaries and Expenses Appropriation. We now find that the Institution can accommodate these costs, as well as adjustments to original construction estimates, and still adhere to the \$75,000,000 Quadrangle authorization. The budget table that follows proposes how these additional items could be accommodated in the period FY 1985 through FY 1987 in conjunction with the expected completion schedule.

For FY 1986, an additional amount of \$4,000,000 is requested to be combined with an equal \$4,000,000 share of nonappropriated funds. A further sum of approximately \$4,000,000 in Federal monies also to be matched with nonappropriated funds is anticipated to be sought in FY 1987. These sums are crucial for the completion of the Quadrangle project and for the public opening in the spring of 1987. The following table lists the post-bid estimates as shown in the FY 1984 Senate Report, compares it with the proposed spending plan, and details the FY 1986 request, as well as FY 1987 estimates.

Proposed Quadrangle Construction Budget Plan  
( \$000's )

<u>Budget Category</u>	FY 1984 Post-Bid <u>Senate Report</u>	Current <u>SI Budget</u>	<u>Estimated Obligations</u>		
			<u>Through</u> FY 1985	<u>In</u> FY 1986	<u>In</u> FY 1987
Design & Construction Management	7,000	8,960	8,460	500	--
Site Preparation	1,500	1,500	1,500	--	--
Construction Contract	40,000	39,400	39,400	--	--
Freer Link Construction & Management	3,500	5,300	425	4,275	600
Construction Contingency	4,500	5,000	3,000	500	1,500
Government Furnished Equipment	2,500	3,650	2,225	725	700
Security Installation	--	2,350	2,350	--	--
Furnishings	--	6,150	1,600	1,550	3,000
Moving	--	450	--	450	--
Final Space Preparation	--	2,200	--	--	2,200
TOTALS	59,000	74,960	58,960	8,000	8,000

The proposed budget plan shows net adjustments to the construction budget of \$3,660,000 necessary since the post-bid budget. This adjustment includes amounts of \$1,960,000 additional for design and construction management of the current contract (offset by a decrease of \$600,000 in the construction contract budget), \$1,800,000 additional for the Freer link construction, and a \$500,000 increase to the construction contingency. In addition, the estimate for government furnished equipment has been increased by a sum of \$1,150,000, from \$2,500,000 to \$3,650,000. A further sum of \$11,150,000 is essential for security installation, furnishings, move of collections and

staff, and final space preparations. The table also shows planned obligations of the \$58,960,000 available in FY 1985, by category, in order to allow the project to proceed on schedule, and requirements for additional funding of \$8,000,000 each year for FY 1986 and FY 1987 to provide full occupancy and operation of the new building.

FY 1986 Request - For FY 1986, the proposed total of \$8,000,000 (\$4,000,000 in Federal monies combined with \$4,000,000 in nonappropriated funds) is designated for construction of the connecting link to the Freer Gallery (\$4,275,000), furnishings and equipment (\$2,275,000), move of collections and staff (\$450,000), design and construction management fees (\$500,000), and an addition to the construction contingency (\$500,000).

An amount of \$4,275,000 is requested for construction of the connecting link between the Quadrangle and the Freer Gallery of Art. The link will modify the Freer Gallery to provide access to the exhibition floors from the subbasement. Changes to the Freer will include stairs and elevators necessary to facilitate public and staff movement between the two buildings and to meet requirements for the disabled. There is provision also for additional restrooms. The initial plan was to contract for this work as part of the design and construction of the Quadrangle building. However, it was later determined that it would be more advantageous to delay design and construction of the connecting link in order to avoid extensive disruption to Freer operations and programs if its staff were first relocated to the completed Quadrangle. This portion of the project accordingly has been scheduled to begin following completion of the building construction contract. The original budget estimate of \$3,500,000 for the construction of the link was based on cost estimates obtained from early Quadrangle design information without the benefit of working drawings. The estimate now has been revised to allow for: escalation of the earlier estimate to the new midpoint of construction (June 1987); additional construction management requirements in order to complete this project separately from the rest of the Quadrangle construction; and the more complex and expensive underpinning design at the Freer as recommended by the architect based upon the experience thus far gained with construction near the Smithsonian Institution Building. The estimated cost is therefore increased by \$1,800,000, to a total of \$5,300,000. In addition to design funds of \$425,000 to be obligated in FY 1985, an amount of \$4,275,000 is required in FY 1986 in order to bid and contract for construction of the link. The remaining funds required to complete this project will be requested in FY 1987.

The Smithsonian also proposes to obligate amounts of \$1,600,000 in FY 1985 for furnishings associated with occupancy of the third level and \$2,275,000 in FY 1986 to purchase furniture and equipment for administrative, shop, and laboratory areas of the two museums. Of this latter amount, \$725,000 is required to purchase equipment that will be installed by the contractor in the laboratories and shops. This equipment includes: fume hoods, dust collection systems, refrigerated vaults for photographic materials, paint spray booths, a fumigation chamber, as well as cabinetry, signage and carpet for non-public areas of the building. The balance of \$1,550,000 is requested for furnishings and equipment for mostly non-public areas of the building. Flexible storage equipment to provide proper storage for the collections and library materials and to furnish areas where artifacts will be received and studied will be required for the expanded administrative areas. Conservation, photo and exhibit production shop equipment also will be needed for these expanded areas. Additional funds will be sought in FY 1987 for furnishings and equipment largely for public areas in order to meet the scheduled spring opening to the public. In determining furnishing and equipment requirements, planning directly involved the staff of the museums that will ultimately occupy the building. Detailed lists of requirements, itemized by functional area, were reviewed to ensure that costs were minimized by using existing equipment and Federal supply schedules.

An additional amount of \$450,000 is estimated to move collections and staff into the building. Valuable objects of the National Museum of African Art and the Arthur M. Sackler Collection now stored at the Museum Support Center in Suitland, will require



secure transportation from their present locations, with special provision being made for the custom crating of fragile items. Fumigation prior to entry into the new building also is required. The present schedule calls for moving the collections into the building beginning in June of 1986.

An additional amount of \$500,000 is requested in FY 1986 for construction management of the current contract. The post-bid Quadrangle budget of \$7,000,000 for construction management was based on accepted General Services Administration budget practices. This estimate did not provide adequately for a mainly underground facility employing unusually complex foundation and other building systems. Following award of a construction contract, the General Services Administration and the Institution agreed to a more intensive management and inspection plan that employs more on-site technical staff than envisioned earlier and retains recognized consultants for assistance with construction scheduling, cost monitoring, legal analysis, and a number of testing services. A total sum of \$8,960,000 is needed for design and construction management, of which approximately \$5,360,000 is for design fees. Of the total amount estimated for construction management (\$3,600,000), a balance of \$500,000 is needed in FY 1986.

Finally, additional amounts of \$500,000 and \$1,500,000 in FY 1986 and FY 1987 respectively, are required to bring available construction contingency funding up to the estimated amount of \$5,000,000 as agreed to by both the General Services Administration and the Institution. The General Services Administration estimates that all changes and claims completed and anticipated as of January 1985, may cost up to \$2,500,000. An amount of \$500,000 in FY 1985 and \$500,000 in FY 1986 are intended to address these and other needs through calendar year 1985 with \$1,500,000 in FY 1987 estimated for future changes and possible claims.



APPENDIX



SMITHSONIAN INSTITUTION  
Salaries and Expenses

Report of Appropriation by Objects of Expense

(Dollars in thousands)

	<u>1984</u> <u>Actual</u>	<u>1985</u> <u>Base /1</u>	<u>1986</u> <u>Estimate /2</u>	<u>Increase 1986</u> <u>over 1985</u>
11 Personnel Compensation.....	94,109	99,467	100,675	1,208
12 Personnel Benefits.....	10,945	12,487	12,496	9
13 Benefits for Former Personnel.....	340	0	400	400
21 Travel & Transportation of Persons.....	1,012	1,142	1,286	144
22 Transportation of Things.....	617	768	981	213
23 Rent, Communications and Utilities.....	17,053	17,004	19,298	2,294
24 Printing and Reproduction.....	1,257	1,552	2,186	634
25 Other Services.....	14,446	14,432	16,614	2,182
26 Supplies and Materials.....	8,145	7,400	10,081	2,681
31 Equipment.....	5,821	9,600	11,849	2,249
Collections Acquisition.....	900	973	1,284	311
32 Land and Structures.....	232	0	0	0
41 Grants.....	1,695	1,350	2,630	1,280
42 Insurance Claims and Indemnities.....	<u>9</u>	<u>10</u>	<u>10</u>	<u>0</u>
TOTAL.....	156,581	166,185	179,790	13,605

/1 This amount includes required supplemental funding of \$3,770 thousand for the cost of the FY 1985 legislated pay raises.

/2 This amount includes a reduction of \$5,800 thousand attributable to the five percent pay reduction proposed for FY 1986.

SMITHSONIAN INSTITUTION

Annual Visitation  
FY 1980 - FY 1984

	<u>FY 1980</u>	<u>FY 1981</u>	<u>FY 1982</u>	<u>FY 1983</u>	<u>FY 1984</u>
<u>MALL</u>					
SI Building	1,023,394	956,190	1,017,782	950,426	966,191
Arts & Industries Building	1,227,597	1,188,507	1,098,091	1,043,224	1,046,480
National Museum of Natural History	5,202,864	4,998,736	4,961,180	5,650,406	6,336,796
National Air and Space Museum	7,257,648	7,538,954	8,453,773	9,837,651	15,123,914
Freer Gallery of Art	311,845	305,411	285,410	269,980	373,208
National Museum of American History	4,625,477	5,162,452	4,463,041	5,049,038	5,392,718
Hirshhorn Museum and Sculpture Garden	978,820	924,805	1,038,910	1,052,786	980,944
<u>OFF-THE-MALL</u>					
American Art & Portrait Gallery	371,539	384,228	356,098	397,232	368,595
Renwick Gallery	235,525	243,900	172,909	149,447	129,989
National Museum of African Art	78,019	102,314	85,874	75,238	50,312
Anacostia Neighborhood Museum	48,570	33,709	46,033	17,210	22,681
Cooper-Hewitt Museum	134,671	146,925	166,778	216,720	131,690
National Zoological Park <u>/1</u>	3,146,000	3,289,000	3,275,000	3,300,000	3,300,000
GRAND TOTAL	<u>24,641,969</u>	<u>25,275,131</u>	<u>25,420,879</u>	<u>28,009,358</u>	<u>34,223,518</u>

/1 Numbers of visitors are estimates based on a sampling system.

PHYSICAL PLANT CONDITION BY FACILITY

Introduction

This report, an overview of Smithsonian facilities, identifies individual building conditions and summarizes repairs and improvements for the period FY 1986 through FY 1990 that are appropriate for funding within the Restoration and Renovation of Buildings account. The total cost estimate for these facility requirements from FY 1986 through FY 1990 is \$133.5 million. The Restoration and Renovation of Buildings Appropriation account is composed of the following project categories: General Repairs; Facade, Roof and Terrace Repairs; Fire Detection and Suppression Systems; Access for the Disabled, Safety and Security, and Correction of Hazardous Conditions; Utility Systems Repairs and Improvements; and Other Projects.

ANACOSTIA NEIGHBORHOOD MUSEUM

The Anacostia Neighborhood Museum leases a building in Anacostia which provides space for exhibition and some administrative functions. This facility is in disrepair and is unsuitable for long-term occupancy. The Museum's Exhibits Laboratory, constructed in 1976, is located at Fort Stanton Park on National Park Service property. This 10,500 square foot building houses administrative, exhibit, shop, storage and research activities. Although the Exhibits Laboratory is in good condition, necessary replacement of the roof and expansion of the building are being undertaken in FY 1985.

Funding will be sought in the planning period for the installation of an elevator and development of a master plan. Total anticipated costs for the period FY 1986 through FY 1990 are estimated at \$405,000.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Install Elevator to Second Floor				55	
Master Plan - Poplar Point			100	250	
TOTALS	0	0	100	305	0

ARTS AND INDUSTRIES BUILDING

The Arts and Industries Building, constructed between 1879 and 1881, contains more than 140,000 square feet of exhibition, staff and storage space. The most recent restoration and renovation of the exhibition halls and entrances was completed for the Bicentennial Celebration.

Extensive renovation of the Arts and Industries Building roof and exterior is in progress to ensure watertightness and energy efficiency. Remaining work for the southeast quadrant includes roof replacement, replacement of gutters and downspouts, repairs and replacement of window components, and pointing and caulking. Space improvements are needed. Improvements to the building's heating, ventilating and air conditioning (HVAC) system are required to better control temperature and humidity variations. HVAC improvements include: installation of an energy conserving system to help regulate temperatures; addition of reheat coils; modification of controls on air handling units; addition of new steam humidifiers; replacement of the cooling tower; and

relocation of unsightly roof mounted mechanical equipment. Other utility projects include the upgrading of electrical wiring and removal of unused electrical and plumbing conduit. Additional smoke detection and sprinkler systems also are required.

These and other building requirements are estimated to cost approximately \$17.7 million through FY 1990 with additional funds anticipated beyond this period to complete the building's renovation.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Industrial Hygiene Safety Lab				70	
General Repairs		50	50	50	50
Roof and Exterior Renovations	1,500	2,500			
Fire Protection	100	75	75	75	75
HVAC Renovation/Energy Conservation	100	500	2,800	3,500	3,000
Space Modifications - Space Study	300	500	500	500	500
Space Modifications - Facade Renovations	300	500			
<b>TOTALS</b>	<b>2,300</b>	<b>4,125</b>	<b>3,425</b>	<b>4,195</b>	<b>3,625</b>

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

The Smithsonian Environmental Research Center was formed in July 1983 by the merger of the Radiation Biology Laboratory in Rockville, Maryland and the Chesapeake Bay Center for Environmental Studies, near Edgewater, Maryland. The Edgewater site is located on approximately 1,800 acres acquired by the Smithsonian since 1963, and an additional 800 acres restricted by covenant to Smithsonian use. Current facilities include an administration building with a laboratory addition, an education and dormitory building, a new maintenance building, several small farm buildings and several trailers. The newer facilities are in good condition, but road repairs and utility systems improvements are needed; and modifications are needed to provide access for the disabled.

It is estimated that approximately \$1.1 million will be required during the planning period FY 1986 through FY 1990 to perform road repairs and improvements, accomplish modifications required to improve access for disabled persons, develop a master plan and make modifications to provide improved laboratory facilities.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
General Repairs	30	30	30	30	50
Road Repairs	100	100	100	100	
Disabled Access - Administration Building				25	
Disabled Access - Rest Room Visitor's Center				25	
Utility Improvements		30	30	30	30
Calf Barn Modifications		30			
Master Plan and Design		300			
<b>TOTALS</b>	<b>130</b>	<b>490</b>	<b>160</b>	<b>210</b>	<b>80</b>



COOPER-HEWITT MUSEUM

The Cooper-Hewitt Museum, acquired by the Smithsonian in 1968, is housed in the historic Carnegie Mansion and the adjoining Miller House (brownstone) in New York City.

Built in the early 1900s, the 64 room mansion was renovated with nonappropriated Trust funds in the early 1970s, and opened to the public in 1976. The renovation project and subsequent efforts have restored the mansion to a fair condition. However, due to its age, repairs and space improvements are required. Modifications are necessary for safety and security, as well as to improve access for disabled persons. Also, HVAC modifications, and roof and window repairs are needed to improve energy efficiency.

It is estimated that approximately \$4 million will be required to accomplish necessary repairs and improvements during the planning period FY 1986 through FY 1990.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Repair/Replacement Wood Floor, First Floor				30	
Elevator Improvements - Mansion					35
General Repairs	30	20	20	20	30
Elevator Improvements - Miller House				10	
Fence Restoration/Repair and Paint		50			
Roof Repairs - Mansion				50	
Disabled Access - Mansion Ramp				10	
Emergency Generator		45			
Utility Systems Study - Miller House		35			
HVAC Renovation/Window Replacement	100	825	600	800	1,000
Space Modifications - Attic		25	250		
TOTALS	130	1,000	870	920	1,065

AMERICAN ART/PORTRAIT GALLERY BUILDING

The Old Patent Office Building, constructed between 1836 and 1866, was transferred by the General Services Administration to the Smithsonian in 1958. The building, a National Historic Landmark, was renovated from 1965 to 1968. Currently, it houses the National Museum of American Art, the National Portrait Gallery and the Archives of American Art, providing approximately 250,000 square feet of space for exhibitions, collections storage and staff activities. The building is in good condition but interior repairs and mechanical system replacement are required.

The heating, ventilating and air conditioning system requires major upgrading to correct existing deficiencies and to improve environmental control and energy efficiency. In addition, fire safety, health and security improvements and extensive interior renovations are needed consistent with plans for relocation of functions presently located in the Old Patent Office Building to the General Post Office Building.

Approximately \$12.2 million will be sought in this planning period for these and other building requirements.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
General Repairs, Storage & Attic Spaces		100	145		
Rest Room Renovations		450			
Exterior Painting - Windows, Trim and Fence				75	
Repair Stone Facade		75			
Fire Protection	100	220	130		
Install Public Address System		150			
Tile Replacement - Great Hall		50	35	35	65
Shop Dust Abatement	50				
Building Accessibility Study				20	
Electrical and Plumbing Repairs				50	
HVAC Renovation			1,000	4,500	400
Building Renovation, Design and Construction		500	2,000	1,000	1,000
TOTALS	150	1,545	3,310	5,680	1,465

#### FREER GALLERY BUILDING

The Freer Gallery Building, constructed between 1916 and 1921, was opened to the public in 1923, providing 68,000 square feet of exhibition, staff and collections storage space. The building is in good condition. Roof, skylight, and gallery repairs and major space improvements including the development of collection storage areas under the courtyard are required. These requirements are expected to cost approximately \$7.7 million during this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Replace Plaster in Galleries		100			
Attic Space Modifications				60	
Roof & Skylight Repairs	400				
Install Public Address System				100	
Courtyard Excavation/Construction	2,500	2,500			
Basement Renovations	2,000				
TOTALS	4,900	2,600	0	160	0

#### HIRSHHORN MUSEUM AND SCULPTURE GARDEN

The Hirshhorn Museum and Sculpture Garden, opened to the public in 1974, provides 226,000 square feet of exhibition, staff and collections space.

The Museum plaza has incurred surface deterioration and some cracking. Repairs to the most deteriorated surfaces have had limited success and it is expected that the entire plaza will have to be replaced. Additional sprinkler systems will be installed and a master plan for space use will be developed during this planning period. A comprehensive energy conservation survey for the building has been completed. Adjustments and alterations to the building's heating, ventilating and air conditioning systems are required to conform to acceptable museum environmental standards.

These projects and other minor improvements are expected to cost approximately \$3.2 million during this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
General Repairs		50	50	50	50
Pave Tunnel - Tunnel Storage				70	
Plaza Resurfacing			1,500		
Sprinkler Systems - Mechanical Rooms		105			
New Rest Room Construction				75	
Six Minor Safety/Security Projects		60			
Sculpture Garden Paving				35	
Energy Study/Implementation		600	400		
Master Plan	75	125			
TOTALS	75	940	1,950	230	50

MUSEUM SUPPORT CENTER

Construction of the Museum Support Center, located in Suitland, Maryland, was completed in 1983. This facility provides a total of 251,000 net assignable square feet of which 146,000 are for storage and museum collections and 105,000 for laboratory, work area, conservation training, and building maintenance and protection services. The facility is in excellent condition, but without adequate public transportation and the building one-third occupied most of the parking spaces are now used and additional parking areas are needed, which are expected to cost \$350,000 in this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Museum Support Center Additional Parking		350			
TOTALS	0	350	0	0	0

NATIONAL MUSEUM OF AFRICAN ART

Located on Capitol Hill in Washington, D.C., the National Museum of African Art occupies the historic Frederick Douglass House, seven contiguous townhouses and several other structures. The Smithsonian acquired these properties in 1979. They are estimated to average about 100 years in age and are of poor quality construction and unsuitable as a museum. Upon acquisition, the Smithsonian installed an elevator in the Douglass House, added security systems, provided access for disabled persons and renovated approximately 1,750 square feet of patio space. No major improvements are planned, due to the pending relocation of the Museum to the Quadrangle.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
No Projects Identified	<u>*</u>	<u>*</u>	<u>*</u>	<u>*</u>	<u>*</u>
TOTALS	-	-	-	-	-

\* Museum will be relocated in 1986.

#### NATIONAL MUSEUM OF AMERICAN HISTORY

The National Museum of American History, which opened to the public in 1964, contains approximately 213,000 square feet of exhibition, staff and collections space. Although in good condition, the building requires continued phased upgrading of its fire protection systems, heating, ventilating and air conditioning systems, and facade and terrace repairs. Roof repairs are in progress.

Further work on the Fire Protection Master Plan is continuing in FY 1985. HVAC improvements will continue throughout this planning period. Other projects included in this planning period are modifications for disabled access, space modifications, and replacement of windows and doors.

These and other requirements are estimated to cost approximately \$12.8 million between FY 1986 and FY 1990.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Registrar's Facility Alterations				25	
Fountain Renovation - Planning and Design				175	
Terrace Repair - Ramp Removal/Install Glass				925	1,000
N & S Entrance Doors Replacement	300				
Replace Ten Stairwell Doors				25	
Fire Protection Master Plan	300	500	500	500	500
Fourth Floor Security				80	
Disabled Access - Modifications		100	200	100	
Security Barriers, Collection Storage Areas		10			
HVAC Renovation/Energy Conservation	1,000	1,800	1,000	1,000	1,000
Upgrade Simplex System		200			
Mezzanine above First Floor		320			
Relocate Space/Functions - HVAC Related		500			
Object Processing Lab Improvements		15			
Conservation Lab Improvements		300			
Miscellaneous Space Modifications	<u>50</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
TOTALS	1,650	3,845	1,800	2,930	2,600

#### NATIONAL MUSEUM OF NATURAL HISTORY

The National Museum of Natural History was completed in 1911, and identical east and west wings were added in 1963 and 1965, respectively. In 1975, an open interior court

was enclosed and three levels, to create additional space primarily for public use, were constructed, bringing the total building area to 1,000,000 square feet.

The most important requirement for this building is continued phased installation of fire detection and suppression systems. The fire protection program, which also includes related architectural modifications, will continue through the planning period and beyond. In the utility systems category, major heating, ventilating and air conditioning improvements are required to achieve energy conservation, to control temperature and humidity and to improve air circulation. Some of these projects to be completed include repair of the main cooling tower, replacement of the HVAC control system and replacement of air handlers. Electrical and plumbing renovations are required in tunnels to replace and to remove deteriorated and obsolete equipment. Projects needed to protect the building's exterior, some which also would improve energy efficiency, include repointing and recaulking the facade and replacing the roof. Space modifications for exhibition purposes are planned, as well as modifications to improve access for the disabled in staff and public areas, and modifications to improve library facilities. These and other building requirements are estimated to cost approximately \$26.3 million between FY 1986 and FY 1990.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Hall 10 Demolition					40
Staff Rest Rooms - W. Loading Dock		40			
Hall 27 Demolition		70			
Baird Auditorium - Mechanical Lift		15			
Hall 30 Demolition		50			
Photo Lab Improvements		75			
Rotunda Column Cleaning		50			
Mall Checkroom Improvements				80	
Roof Replacement - Design and Construction			1,000	1,000	1,000
Caulk & Point Facade	200	100			
Fire Protection Master Plan	300	500	400	400	400
N & S Entrance Modifications	200	280			
New Interior Handrails		150			
Disabled Access - Hall 16					125
Dome Access Modifications	35				
Tunnel Renovation			50	50	50
HVAC Renovation/Energy Conservation	235	400	3,000	6,200	7,200
Relocate Sewage Line - West Court		150			
Space Modifications/Improvements		500	500	500	500
S.I. Libraries - Space Modifications	<u>200</u>	<u>215</u>			
TOTALS	1,170	2,595	4,950	8,230	9,315

#### NATIONAL AIR AND SPACE MUSEUM

The National Air and Space Museum, opened to the public in 1976, provides approximately 500,000 square feet of exhibition, staff and support space, including a parking garage. Roof, facade and terrace repairs are needed due to water intrusion and weathering problems.

Corrective facade work has begun and is expected to include recaulking, repair of some marble and related flashing, reinsulation at parapets, and flashing of copings. Repairs expected to begin in this planning period include reconstruction of the terrace waterproof membrane, replacement of drains and installation of a new paving system. HVAC

system modifications and implementation of energy conservation measures, primarily associated with the mechanical systems, are projected in the current five-year plan, as well as additional fire and safety programs and space modifications.

These and other requirements are estimated to cost approximately \$9.3 million through FY 1990.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Paint Structural Trusses				125	
Install Removable Eliminators				150	
Replace Third Floor Ceiling		200			
Facade Repairs		100	200	200	200
Replace Plaza Surface		250	4,500		
Roof Repairs				300	300
Fire Protection	100	100	100	100	100
Replace Garage Ramp Snow Melters		70	70		
Replace Entry Door Grates		125			
Emergency Telephone and Lighting System		260			
Energy Conservation		500	300	300	300
Replace Reheat Coils		150	50		
Space Modifications	50	50			
<b>TOTALS</b>	<b>150</b>	<b>1,805</b>	<b>5,220</b>	<b>1,175</b>	<b>900</b>

#### RENWICK GALLERY OF ART

The Renwick Gallery of Art, constructed between 1859 and 1874, was originally designed to house the Corcoran Gallery of Art. In 1897, the Corcoran moved to its current location and the building was purchased by the government. It was transferred to the Smithsonian in 1965 for restoration to its original purpose as an art museum. The building is a National Historic Landmark.

The brick portion of the facade is in good condition, but the exterior stone and windows have deteriorated significantly; stone and window replacement are under way and will be completed with funds appropriated between FY 1978 and FY 1985. Scheduled replacement of mechanical equipment, installation of emergency lighting and new security systems and general maintenance projects are planned through FY 1990.

These requirements are estimated to cost approximately \$3.4 million in this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Roof Repairs				50	
Emergency Lighting				50	
Security - Electrical Wiring		50			
Install Public Address System				50	
Energy Study/Implementation		200	1,000	1,000	1,000
Space Use Study - Basement		40			
TOTALS	0	290	1,000	1,150	1,000

WHIPPLE OBSERVATORY, MT. HOPKINS, ARIZONA

Established in 1968, the Fred L. Whipple Observatory is located on 390 acres and buffered by an additional 4,354 acres of National Forest Service land on Mt. Hopkins, near Tucson, Arizona. Facilities on the mountain include a Multiple Mirror Telescope at the summit and other telescopic observation and support structures, dormitory/dining facilities and water storage facilities. Support and administrative activities are located in leased space 20 and 1/2 miles from the Observatory. A major multi-year project has been completed to improve road safety and access, as well as to reduce future maintenance requirements. Although existing structures are serviceable, some changes are required to improve efficiency. Development of a master plan will continue through 1986.

During the planning period, it is anticipated that approximately \$895,000 will be required for recurring road maintenance, further development of the master plan including planning for a more suitable, permanent base camp site, construction of a power line and generator building, and the first phase of a communication network.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
General Repairs	50	80	80	80	80
Summit Power Line		50			
Standby Generator Building		100			
Master Plan - Base Camp	60				
Ridge Dormitory/Design and Construction		40			
Communications Link	200	75			
TOTALS	310	345	80	80	80

SMITHSONIAN INSTITUTION BUILDING

The Smithsonian Institution Building, constructed from 1847 to 1855, provides 55,000 square feet of exhibition and staff space.

The major requirement for FY 1986 is continuation of the installation of smoke detection and sprinkler systems and renovation of electrical wiring systems. Also planned for this period are window repairs, facade cleaning and repairs, implementation of an energy conservation program, plastering repairs, lighting modifications, and development and implementation of a master plan.

These requirements are estimated to cost approximately \$4.4 million during this planning period.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Interior Repairs - North Lobby	50	50			
Caulk and Point Facade/Window Replacement	200	660	300	300	300
Fire Protection	100	250	200	200	200
Convert Elevator #5		150			
South Tower Egress		170			
New Lighting - Great Hall and Lounge					750
Utility System Study/Implementation		40	100		
Master Plan, Design and Implementation		50	100	100	100
TOTALS	350	1,370	700	600	1,350

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Facilities of the Tropical Research Institute are located at Barro Colorado Island (BCI), Galeta Point, Balboa (Ancon and Tivoli sites) and Naos Island. Some 50 structures scattered throughout 17 acres of land provide a site for tropical research. The condition of existing buildings, piers and utilities varies with each facility, and a study to determine future needs for these facilities is under way. Many of the buildings and their operating systems have deteriorated significantly and are inadequate to meet programmatic needs.

In addition to a master plan, there are other requirements which need to be met within the planning period. These include continuation of water, sewage and fire protection systems installations at BCI, installation of emergency and standby generators and a communications system, and construction of a petroleum storage facility. Replacement of buildings includes the design and construction of a conference/dining facility on BCI, construction of a dormitory on Naos Island and renovation of an apartment at Gamboa. The cost of these requirements for the planning period is approximately \$2.1 million.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
General Repairs	50	50	50	50	50
Fire Protection - BCI		75			
Petroleum Storage Facility - BCI				25	
Upgrade Water and Sewage Systems - BCI		75			
Upgrade Sewage System - Galeta		20			
Standby Generator - Naos		110			
Communications Structure				45	
Emergency Generator - BCI	60				
Conference/Dining Facility - BCI	665				
Master Plan	130				
Dormitory Construction - Naos Island	415				
Dormitory Renovation - Gamboa	220				
TOTALS	1,540	330	50	120	50



## SUITLAND FACILITY

Twenty-five metal buildings and several other structures located on 100 acres at Suitland, Maryland, provide collections storage, conservation, restoration and exhibits support space principally for The Mall museum operations of the National Air and Space Museum, National Museum of American History and National Museum of Natural History. The floor area of these buildings is approximately 312,000 square feet. They were designed originally for temporary storage of materials and equipment that are not affected by environmental conditions. However, renovation of certain buildings is required to ensure that proper environmental conditions exist for collections storage and exhibit purposes. Also, asbestos insulation must be replaced and fire detection and suppression systems installed. Constant attention to maintenance and upgrading is essential to long-term museum use of these buildings. An amount of approximately \$4.1 million is estimated for these projects between FY 1986 and FY 1990.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Construct Balcony NASM Bldg. 24		60			
Road Repairs - NASM Bldgs. 13 & 14		110			
Replace Roll-up Door	15				
Covered Storage for Rolling Equipment - NASM				160	
Exterior Maintenance - NASM Bldgs. 20 & 24		60			
Fire Protection NMAH Bldgs. 19,A,B,C,D		250	100	100	
Building 10 Addition for Chemical Cleaning				200	
Disabled Access - Rest Rooms		20			
Perimeter Road/Repair Security Fence			50		
HVAC Upgrade - Bldgs. 22 & 23				100	
Electrical Upgrade - Bldgs. 7,22,23				40	
NMAH Building 17,19,A,B,C,D Modifications	500	750	250	250	
Master Plan	130	200			
Exhibits Storage Building - NASM		670			
OPlantS Maintenance Building					70
TOTALS	645	2,120	400	850	70

## MISCELLANEOUS PROJECTS

Additional Institution facility requirements include: the containment or removal of exposed asbestos insulation at a number of buildings; installation of a central proprietary security system; advance project planning and design; space modifications; bronze door restoration; security lighting improvements; emergency repairs; emergency power study; Mall raceway system; development of a nursery and greenhouse; and a day care center.

These requirements are estimated to cost approximately \$23.8 million through FY 1990.

(Dollars in thousands)

<u>Work Description</u>	<u>Fiscal Year</u>				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>
Study - Exterior Signage				50	
Restore and Maintain Bronze Doors		30	25	25	25
Pavement Repairs	50	150	150	150	
Emergency Repairs	100	200	200	200	200
Security Lighting - Mall		200	200	200	200
Asbestos Abatement	500	500	500	500	500
Emergency Power Study/Design		150	400		
Proprietary Alarm System	275				
Mall Master Raceway	250	500	3,000	3,000	3,000
Advanced Planning and Design	200	350	400	400	400
Day Care Center		450			
Space Modifications		500	500	500	500
Greenhouse/Nursery Master Plan & Construction		150			4,000
TOTALS	1,375	3,180	5,375	5,025	8,825

( \$1,000s )

SMITHSONIAN INSTITUTION - FINANCIAL SUMMARY  
Fiscal Years 1954-50

	FY 54 Actual	FY 55 Budget	FY 56 Estimate
<b>SI OPERATING FUNDS</b>			
<b>FUNDS PROVIDED:</b>			
FEDERAL APPROP. - S&E .....	156,683	162,415**	179,790
FEDERAL GRANTS & CONTRACTS .....	14,878	16,445	15,407
<b>NON-APPROP. TRUST FUNDS</b>			
<b>Investment Income</b>			
-Unrestr. General & Spec. Purpose.....	3,787	3,507	3,566
-Restricted.....	3,236	3,337	3,351
<b>Gifts &amp; Grants (Ex. Gifts to Endow.)</b>			
-Unrestr. General & Spec. Purpose.....	144	170	175
-Restricted.....	5,859	6,666	4,932
<b>Self-Generated Revenues</b>			
<b>Institutional (Gen. Unrest.)</b>			
-Gross Revenues.....	114,877	120,730	130,275
-Less Related Expenses.....	(95,864)	(104,130)	(112,420)
-Net Income.....	19,013	16,600	17,855
<b>Bureau (Spec. Purpose)</b>			
-Gross Revenues.....	2,673	3,029	3,133
-Less Related Expenses.....	(2,034)	(2,360)	(2,407)
-Net Income.....	639	669	726
<b>Other Misc. - Unrestricted.....</b>			
-Restricted.....	1,126	1,101	1,216
	1,087	969	1,006
<b>Total Non-Approp. Tr. Funds - Gross.....</b>	<b>132,780</b>	<b>139,509</b>	<b>147,654</b>
-Net of Exps. of Self-Gen. Revs. ....	34,891	33,019	32,827
<b>TOTAL ALL OPER. FUNDS PROVIDED:</b>			
-Gross.....	304,350	318,369	342,851
-Net.....	206,452	211,879	228,024
<b>FUNDS APPLIED:</b>			
Science.....	74,134	78,669	81,830
Less: SAO Overhead Recovery.....	(2,226)	(2,260)	(2,283)
History & Art.....	33,011	35,487	40,413
Public Service.....	3,526	3,800	4,178
Museum Programs.....	10,976	11,581	12,843
Directorate of International Activities.	-	938	1,406
Special Programs.....	14,805	17,306	19,943
Associates Pgms/Business Mgt. ....	884	1,001	1,055
<b>Administration</b>			
-Federal Appropriation.....	12,201	11,059	6,485***
-Trust Funds.....	8,211	8,763	9,125
Less: SI Overhead Recovery.....	(6,528)	(7,000)	(7,300)
Facilities Services.....	46,821	49,778	56,714
<b>TOTAL OPERATING FUNDS APPLIED .....</b>	<b>195,815</b>	<b>200,622</b>	<b>224,400</b>
<b>TRANSFERS (Non-Approp. Trust Funds)</b>			
To Plant Funds.....	3,424	322	522
<b>To Endowment Funds</b>			
Unrestricted Purpose.....	3,313	3,000	3,000
Restricted Purpose.....	222	126	135
<b>Total Transfers.....</b>	<b>6,959</b>	<b>3,448</b>	<b>3,657</b>
<b>CHANGE IN FUND BALANCE</b>			
Unrest. & Special Purpose.....	2,252	(804)	716
Restricted (Incl. Fed. Grants & Contr.).	1,426	(387)	(758)
<b>Total.....</b>	<b>3,678</b>	<b>(1,191)</b>	<b>(42)</b>
<b>FUND BALANCES - END OF YEAR</b>			
Unrestricted & Special Purpose.....	21,191	20,387	21,103
Restricted (Incl. Fed. Gr. & Contracts)	9,097	8,710	7,952
<b>Total Operating Fund Balances.....</b>	<b>30,288</b>	<b>29,097</b>	<b>29,055</b>
* * * * *			
<b>OTHER FEDERAL APPROPRIATIONS</b>			
-Foreign Currency Program.....	7,040	8,820	2,500
-Construction.....	4,500	18,320	23,726
<b>TOTAL FEDERAL APPROPRIATIONS .....</b>	<b>168,223</b>	<b>189,561</b>	<b>206,016</b>

\*\*Does not include supplemental for the costs of legislated pay raises.

\*\*\*Includes a reduction of \$5.8 million reflecting the President's proposal to reduce Federal salaries in fiscal year 1986 by five percent. This sum has not been distributed by unit.

Smithsonian Institution -- 1984

Financial Report

Ann R. Leven, Treasurer

SUMMARY: Fiscal year 1984 marked a year of change at the Smithsonian, most notably the appointment of Robert McC. Adams as the ninth Secretary of the Institution and the retirement of S. Dillon Ripley as the eighth Secretary. Mr. Ripley's extraordinary legacy is no where more visible than in the Institution's fiscal report. In fiscal year 1965, Mr. Ripley's first full year as Secretary, the Institution's operating budget was \$30 million. For the year just ended, Mr. Ripley presided over a greatly expanded Institution with a budget ten-fold that of fiscal year 1965.

Mr. Ripley's twenty-year tenure, as referenced elsewhere in the Smithsonian Year, brought new vitality to the Institution, vitality that cannot be measured in dollars. Mr. Ripley acted to shape the form and focus of the Institution. New museums were added, particularly in the arts. Under Dillon Ripley's aegis, the Cooper-Hewitt Museum, the Hirshhorn Museum and Sculpture Garden, the Renwick Gallery, the Anacostia Neighborhood Museum, and the National Museum of African Art joined the Smithsonian family. The National Museum of American Art and the Portrait Gallery found new homes in the Old Patent Office Building, lovingly restored under Mr. Ripley's guidance. The National Air and Space Museum opened its new building in July 1976. In 1983 construction began on the Quadrangle, Mr. Ripley's last and most expansive project on the Mall.

Public accessibility to American culture and diversity was further enhanced by a variety of outreach activities, most notably Smithsonian Magazine which stands as the preeminent publication of its kind in the world today. Other programmatic triumphs include the annual Folklife Festival, the Archives of American Art, and the extraordinarily active Associates Programs. Were all this not sufficient, during the Ripley years research efforts, assistance to other museums and innovative exhibits enhanced the lay public's and the scholars' perspective.

The accomplishments of the Ripley years have been supported in substantial proportions by federal appropriations. In recent years, non-appropriated trust funds have also contributed an increasing share. In 1964 there were some 40 private donors to the Institution; in fiscal year 1984 there were more than 30,000. The unprecedented sum of \$37.5 million in private funds was raised, principally by Mr. Ripley, for the Quadrangle to match monies pledged by Congress for the project.

Fiscal year 1984 marks the culmination of the growth, excitement and achievement of the Ripley years. The following pages detail the Institution's finances. It is clearly apparent that the Smithsonian is a far more complex organization than it was in 1964. Four Treasurers served Mr. Ripley: Edgar L. Roy and Otis O. Martin in the early years; T. Ames Wheeler from 1968 to 1979, and Christian C. Hohenlohe from 1979 to 1983. John F. Jameson, Assistant Secretary for Administration, served as acting Treasurer from November 1983 through July 1984. Ann R. Leven, former Treasurer of The Metropolitan Museum of Art, joined the Institution in August 1984.

As the Smithsonian begins the Adams years, the Institution looks forward to a continuation of the broad-based support of both the Administration and the Congress and of the public at large for further enhancement of its research, exhibition, education, and collection management endeavors.

#### Operating Funds - Sources and Application

As may be seen from Table 1, the gross amount available for operations in fiscal year 1984 was \$304,350,000, an increase of 9 percent when compared to the previous year's total of \$277,974,000. Federal appropriations contributed 51 percent of the fiscal year 1984 revenues, nonappropriated sources accounted for 44 percent, and 5 percent were from federal agency grants and contracts.

After deducting expenses of the nonappropriated auxiliary and bureau activities, net operating income increased by \$18 million over the prior year to \$206,452,000. Federal funds accounted for 76 percent of net revenue, nonappropriated funds contributed 17 percent, a slight increase over fiscal year 1983, with the 7 percent balance from federal grants and contracts. The application of funds by all Smithsonian bureaus is outlined in Table 2, with further supporting detail in other tables.

## FEDERAL APPROPRIATIONS

Federal appropriations provide the core support for the Institution's continuing programs in research, exhibitions, education, publishing, and collections management, including related administrative and support services. They provide, as well, for the maintenance and protection of the collections and physical plant.

Federal support for the Institution's operating programs totaled \$156,683,000 in fiscal year 1984, an increase of \$9.4 million over fiscal year 1983. Although the majority of this increase -- some \$5.4 million -- was required to cover inflationary increases in salaries and other expenses, significant new funding of \$4 million was provided for a variety of program activities. Of this increase, \$1.2 million was received for operations and program requirements at the Museum Support Center, which in fiscal year 1984 completed its first full year of operation, and for strengthening the conservation activity at the Center. Complementing the growth in construction support for major renovations and repairs (discussed below), funding was received in the operating account for professional architectural and engineering services and for facilities maintenance at two off-mall facilities -- the Cooper-Hewitt Museum and the National Zoological Park. Other significant increases were provided for expansion of the Institution's computing capabilities, for enhancing the security of buildings and collections, and for replacement and upgrading of scientific research equipment at the Astrophysical Observatory and the Tropical Research Institute.

## FEDERAL AGENCY GRANTS AND CONTRACTS

Support from federal agencies in the form of grants and contracts totaled \$14,878,000 in fiscal year 1984, an increase of 13 percent over the previous year. These funds constitute an important source of research support for the Institution while also benefiting the granting agencies by providing access to Smithsonian expertise and resources. As in prior years, the Smithsonian worked closely with the National Aeronautics and Space Administration (NASA). As reflected in Table 3, expenditures under NASA grants totaled approximately \$11.3 million in fiscal year 1984 primarily for research programs at the Astrophysical Observatory. Sponsored research included balloon-borne telescope observations, the study of meteorite samples from the Antarctic, x-ray telescope studies and the design of hydrogen masers.

Support from other agencies provided an additional \$3.6 million for such varied programs as an ecological study of the Chesapeake Bay Watershed, the 1984 Festival of American Folklife, and a mariculture project to study and develop food sources from the sea.



## NONAPPROPRIATED TRUST FUNDS

Income from nonappropriated trust fund sources including gifts, grants, endowment and current fund investments, and revenue producing activities totaled \$132,789,000 in fiscal year 1984. After exclusion of expenses necessary to generate auxiliary and bureau activity revenues, net income available for Institutional programs equalled \$34,891,000, an increase of \$6.7 million or 24 percent, over fiscal year 1983. Of the total net income, \$24.7 million, or 71 percent, was available for unrestricted program use and was distributed as approved by the Board of Regents. The balance of approximately \$10.2 million was restricted, that is available only for purposes specified by the benefactor.

Restricted fund revenues of \$10.2 million were up \$1 million from the previous year. They consisted of \$5.9 million from gifts and grants, \$3.2 million from endowment investment income and interest earned on restricted current fund balances, and \$1.1 million from other sources, primarily fund raising activities at the Archives of American Art and sales desk activities at the Freer Gallery of Art. Restricted endowment investment income served as the major funding source for oceanographic research administered by the National Museum of Natural History; for operations of the Freer Gallery of Art (now included in the Center for Asian Art); and a wide variety of research, exhibition, publication and educational activities at other Smithsonian bureaus. Major gift support was received during the year for important additions to the collections, including "Portrait of Mary Cassatt" by Edgar Degas and "Callers" by Walter Ufer;

for major exhibitions being developed by the National Museum of Natural History and the Smithsonian Institution Traveling Exhibition Service; and for research and archival activities of the Archives of American Art.

Unrestricted funds include both those available for general operating purposes and a smaller category of Special Purpose funds which have been internally designated by the Institution. The former and larger category, Unrestricted General Purpose funds, is derived primarily from investment income and net revenues of the auxiliary activities. In fiscal year 1984, net general purpose unrestricted funds provided over \$22 million for general Institutional needs, an increase of some \$5.8 million over the previous year. As displayed in Table 5, this improved performance was due to increased income generated by the Institution's working capital pool invested at favorable rates and to the strong performance of the auxiliary activities.

As in past years, the Smithsonian Associate programs contributed handsomely to auxiliary activity revenues, on both a gross and net basis, reflecting the continued popularity of the Smithsonian magazine and the generosity of the Contributing Membership. In fiscal year 1984 Contributing Members donated approximately \$2.7 million in unrestricted gift support. Income from the Museum Shops benefited from generally strong sales enhanced by the new shop at the Museum of American History and high visitation to all museums. The Mail Order Program offered new items and an expanded catalog. The Smithsonian Institution Press experienced extremely favorable reviews and sales from its new recording "Big Band Jazz from the Beginnings to the Fifties" and the popular publication Treasures of the Smithsonian. In October 1983, the Smithsonian-managed food service operations in the National Air and Space

Museum building and the Hirshhorn Museum and Sculpture Garden were restored to concession management, affecting the financial statements accordingly.

The general unrestricted funds supported a portion of the Institution's administrative costs and most importantly provided for, among other bureaus activities, programs of the Cooper-Hewitt Museum, the Visitor Information and Associates' Reception Center, the Office of Telecommunications, and the Office of Folklife Programs. In addition, during fiscal year 1984, there were special allotments for several major exhibitions and related activities including the Shanghai Exhibition in the Thomas Mellon Evans Special Exhibition Gallery, the Hirshhorn Tenth Anniversary exhibition, and Smithsonian participation in the Edinburgh Festival. The development of a new, integrated personnel/payroll system also received funding. Transfers to special purpose funds financed the Collections Acquisition, Scholarly Studies, and Educational Outreach Programs (\$2,250,000), stipends for pre- and post-doctoral fellows under the Smithsonian Fellowship program (\$1,738,000), income sharing to the bureaus for their discretionary uses (\$638,000), research grants to Smithsonian professional staff (\$400,000), and other projects. An amount of \$3.4 million was transferred to plant funds for Quadrangle development and for the purchase of a residence for Smithsonian Secretaries. \$3.3 million was transferred to unrestricted endowment, to build the future resources of the Institution.

The Unrestricted Special Purpose funds were supplemented by approximately \$4.6 million during fiscal year 1984, principally with monies generated by bureau activities. Illustrative of such revenue activities are fees charged for films at the National Air and Space Museum

and the admission and membership fees at the Cooper-Hewitt Museum.

Investment income earned on unexpended fund balances and from designated endowments added \$700,000. Gifts and miscellaneous income, such as zoo parking receipts which are being reserved for future expansion of parking facilities at the National Zoo, brought in another \$1.2 million.

## Special Foreign Currency Program

Foreign currencies, accumulated primarily from sales of surplus agricultural commodities under Public Law 83-480 and determined by the Treasury Department to be in excess of the current needs of the United States, are made available to the Institution through the Special Foreign Currency Appropriation. In fiscal year 1984, an appropriation of excess foreign currencies equivalent to \$7,040,000 was received under this program by the Smithsonian. Included in this amount was \$4 million (as compared to last year's \$2 million) to continue a program of grants to United States institutions for field research and advanced professional training in fields of traditional Smithsonian interest and competence.

An additional \$2 million was provided to the Indian rupee reserve account established in fiscal year 1980 to ensure continued program support of the American Institute of Indian Studies. The balance of \$1,040,000 represented the second increment of support for the international effort to restore and preserve the ancient city of Moenjodaro in Pakistan. An additional amount in nonconvertible Pakistani currency is expected to be sought by the Institution to fulfill the United States' commitment to the project. Obligations during the fiscal year by research discipline and country are provided in Table 8.

## Construction

New funding in fiscal year 1984 for construction and renovation projects at the Institution totaled \$24,126,000. As shown on Table 9, a Federal appropriation of \$9 million was provided for restoration and renovation of existing Smithsonian facilities. A further \$3.5 million was designated specifically for construction and renovation of National Zoological Park facilities both at Rock Creek Park and Front Royal. The types of projects funded include facade, roof, and terrace repairs necessary to maintaining the structural integrity of buildings; the planning and installation of fire detection and suppression systems; improvements to utility systems to increase energy efficiency and to provide stable temperature and humidity conditions for the preservation of the collections; and repairs, modifications, and improvements to preserve and maintain the Institution's buildings in a safe and energy efficient manner. In addition, Federal dollars covered construction of a much needed veterinary hospital at Front Royal.

By September 30, 1984, the Institution had achieved its \$37.5 million goal equal to one-half the estimated cost of constructing the Quadrangle Center for African, Near Eastern, and Asian Cultures. Of the total raised, \$10.8 million was received in fiscal year 1984: \$8.1 million was from gifts and earned interest and \$2.7 million was a transfer from unrestricted trust funds. It must be noted that Congress rescinded \$8 million of the \$36.5 million appropriated in fiscal year 1983 for its share of Quadrangle construction. This action was based on anticipated savings resulting from the unexpectedly low contract bid for construction.

In taking this action, Congress restated its commitment to sharing equally the project's cost and indicated a willingness to reconsider its decision based on identified need.

Other nonappropriated receipts included grant support for construction of research facilities at the Tropical Research Institute, a donation for relocation of an antique greenhouse, and interest earned on unexpended gifts to plant funds. In addition to the \$2.7 million for Quadrangle construction, transfers from unrestricted funds were made for the purchase and improvement of a residence for Smithsonian Secretaries and for mortgage payments on property currently occupied by the National Museum of African Art.

## Endowment and Similar Funds

As of September 30, 1984, the market value of the Smithsonian Endowment Fund was \$132,416,000, as compared to \$132,031,000 on September 30, 1983. \$131,113,000 is invested in the Pooled Consolidated Endowment Fund under outside investment management, \$1,000,000 is on permanent deposit in the United States Treasury as required, and the remaining \$303,000 includes restricted stock and donated real estate. As shown in Table 10, the majority of the funds, 56 percent (\$74,672,000), represents restricted endowment, with income available only for the purposes specified by the donor. The remaining 44 percent (\$57,744,000) are unrestricted endowment funds, with income available for general support of the Institution. Certain of the unrestricted funds, such as the Lindbergh Chair of Aerospace History Endowment, have been designated by the Regents for specific purposes. A complete listing of all endowment funds, together with current book and market values, may be seen on Table 13.

Investment of the Pooled Consolidated Endowment Fund is subject to policy guidelines established by the Board of Regents. Funds are managed by professional advisory firms under the oversight of the Investment Policy Committee and the Treasurer. During fiscal year 1984 the number of managers was increased to four with the addition of Granahan-Everitt Investments, Inc. As of the end of the year, the respective portion of the Fund by manager was: Fiduciary Trust Company of New York (46 percent), Batterymarch Financial Management (30 percent), Torray Clark & Company (20 percent), and Granahan-Everitt Investments, Inc. (4 percent).

For fiscal year 1984, the total rate of return (market appreciation as well as interest and dividend yield) of the Pooled Consolidated



Endowment Fund, as calculated by an independent investment measurement service, was +0.4 percent, as compared to +4.6 percent for the Standard & Poor's 500 Average and +2.2 percent for the Dow Jones Industrial Average both calculated on the same basis. The year-end market values and recap of activity of the Consolidated Endowment over the past five years are reflected in Tables 11 and 12, respectively.

Under the Total Return Income policy followed by the Institution, total investment return is defined as yield (interest and dividends) plus appreciation, including both realized and unrealized gains. A portion of this return is made available for expenditure each year, and the remainder is reinvested as principal. This total return income payout is determined in advance of the fiscal year by the Board of Regents based on a review of anticipated interest and dividend yields, support needs of the Institution's bureaus and scientists, inflationary factors, and the five-year running average of market values, adjusted for additions or withdrawals of capital. After income payout of \$3,820,000 in fiscal year 1984 to endowments in the Pooled Consolidated Endowment Fund, \$2,794,000 of excess interest and dividend yield was available for reinvestment into endowment principal. Net transfers to endowment, primarily to unrestricted endowment funds, provided an additional \$3.5 million with \$283,000 received in gifts and other income. At the request of the donor, balances in the Shryock Endowment for Docents were transferred to restricted current funds.

Upon request, a listing of the securities held in the Pooled Consolidated Endowment Fund as of September 30, 1984, may be obtained from the Treasurer of the Institution.

## Related Organizations

The Woodrow Wilson International Center for Scholars, the National Gallery of Art, and the John F. Kennedy Center for the Performing Arts were established by Congress within the Institution. Each organization is administered by its own board of trustees and reports independently on its financial status. Fiscal, administrative, and other support services are provided the Woodrow Wilson International Center for Scholars on a reimbursement basis; office space is made available for Center operations.

An independent nonprofit corporation, the Friends of the National Zoo (FONZ), operates under contract a number of beneficial concessions for the National Zoological Park. During calendar year 1983 (FONZ's fiscal year), FONZ concession and rental fees to the Smithsonian amounted to approximately \$431,000. In addition, FONZ contributed other important financial and volunteer support to zoo programs. Additional information on FONZ is to be found elsewhere in Smithsonian Year 1984.

Reading is Fundamental, Inc., associated with the Institution since 1968, now operates as an independent, separately incorporated entity dedicated to the improvement of reading abilities in children. Primary support is derived from private contributions and a federal contract with the Department of Education to operate the Federal Inexpensive Book Distribution Program. Administrative services are offered by the Institution on a contract basis.

For fiscal year 1984, the Smithsonian also provided administrative and fiscal assistance to the Visions Foundation, a start-up venture in the arts.

## Accounting and Auditing

The Institution's funds, federal and nonappropriated, are audited annually by the independent public accounting firm of Coopers and Lybrand. Their report for fiscal year 1984 is reprinted on the following pages. The Smithsonian's internal audit staff audits Smithsonian activities and financial systems throughout the year. Additionally, the Defense Contract Audit Agency conducts an annual audit of grants and contracts received from federal agencies and monitors allocated administrative costs.

The Audit and Review Committee of the Board of Regents met several times during the year pursuant to their responsibility under the bylaws of the Institution. The committee is charged with reviewing the Smithsonian's accounting systems and internal financial controls; facilitating communication between the Board of Regents and the internal audit staff, the independent accounting firm, and the General Accounting Office; and reviewing operations of the Institution for compliance with approved programs and policies.

TABLE 1

Financial Summary  
(In \$1,000s)

	FY 1982	FY 1983	FY 1984
INSTITUTIONAL OPERATING FUNDS			
FUNDS PROVIDED:			
Federal Appropriations--Salaries & Expenses.....	\$131,170	\$147,256	\$156,683
Federal Agency Grants & Contracts.....	13,217	13,125	14,878
Nonappropriated Trust Funds:			
For Restricted Purposes.....	6,821	9,162	10,182
For Unrestricted & Special Purposes:			
Auxiliary & Bureau Activities Revenues--Gross.....	97,350	104,129	117,550
Less Related Expenses.....	<u>(88,596)</u>	<u>(89,397)</u>	<u>(97,898)</u>
Auxiliary & Bureau Activities Net Revenue.....	8,754	14,732	19,652
Investment, Gift, & Other Income.....	<u>4,808</u>	<u>4,302</u>	<u>5,057</u>
Total Net Unrestricted & Special Purpose Revenue...	13,562	19,034	24,709
Total Nonappropriated Trust Funds*--Gross.....	108,979	117,593	132,789
--Net.....	20,383	28,196	34,891
Total Operating Funds Provided--Gross.....	253,366	277,974	304,350
--Net.....	<u>\$164,770</u>	<u>\$188,577</u>	<u>\$206,452</u>
FUNDS APPLIED:			
Science.....	\$ 64,837	\$ 68,895	\$ 74,134
Less SAO Overhead Recovery.....	(2,487)	(2,264)	(2,226)
History & Art.....	26,762	30,979	33,011
Public Service.....	3,782	2,843	3,526
Museum Programs.....	8,539	9,702	10,976
Special Programs.....	9,533	13,342	14,805
Associates & Business Management.....	543	1,057	884
Administration--Federal**.....	9,719	11,032	12,201
--Nonappropriated Trust Funds.....	5,733	7,226	8,211
Less Smithsonian Overhead Recovery.....	(5,338)	(6,331)	(6,528)
Facilities Services.....	<u>39,327</u>	<u>43,653</u>	<u>46,821</u>
Total Operating Funds Applied.....	160,950	180,134	195,815
Transfers (Nonappropriated Trust Funds)			
Unrestricted Funds--To Plant.....	1,064	2,069	3,424
--To Endowment.....	2,259	3,084	3,313
Restricted Funds--To Endowment.....	<u>318</u>	<u>637</u>	<u>222</u>
Total Operating Funds Applied & Transferred Out.....	<u>\$164,591***</u>	<u>\$185,924</u>	<u>\$202,774</u>

TABLE 1 - continued

Financial Summary  
(In \$1,000s)

	FY 1982	FY 1983	FY 1984
<b>CHANGES IN NONAPPROPRIATED TRUST FUND BALANCES:</b>			
Restricted Purpose (Incl. Fed. Agency Gr. & Contracts).	\$ (45)	\$ 1,765	\$ 1,426
Unrestricted--General Purpose.....	5	28	10
--Special Purpose.....	<u>404</u>	<u>860</u>	<u>2,242</u>
Total.....	<u>\$ 364</u>	<u>\$ 2,653</u>	<u>\$ 3,678</u>
<b>YEAR-END BALANCES -- NONAPPROPRIATED TRUST FUNDS:</b>			
Restricted Purpose.....	\$ 5,906	\$ 7,671	\$ 9,097
Unrestricted--General Purpose.....	5,048	5,076	5,086
--Special Purpose.....	<u>13,003</u>	<u>13,863</u>	<u>16,105</u>
Total.....	<u>\$ 23,957</u>	<u>\$ 26,610</u>	<u>\$ 30,288</u>
<b>OTHER FEDERAL APPROPRIATIONS</b>			
Special Foreign Currency Program.....	\$ 4,320	\$ 2,000	\$ 7,040
Construction.....	<u>9,744</u>	<u>46,500</u>	<u>4,500</u>
Total Federal Appropriations (Incl. S&E above).....	<u>\$145,234</u>	<u>\$195,756</u>	<u>\$168,223</u>

\*Figures do not include gifts and other income directly to Plant and Endowment Funds: FY 1982-\$2,197,000; FY 1983-\$15,048,000; FY 1984-\$8,484,000.

\*\*Includes unobligated funds returned to Treasury: FY 1982-\$124,000; FY 1983-\$62,000; FY 1984-\$102,000.

\*\*\*Includes \$185,000 available for FDR Centennial carried forward from FY 1981.

TABLE 2

Source and Application of Operating Funds  
Year Ended September 30, 1984  
(Excludes Special Foreign Currency Funds, Plant Funds and Endowments)  
(In \$1,000s)

Funds	Nonfederal Funds						
	Federal funds	Total non-federal funds	Unrestricted			Restricted	
			General	Auxiliary activities	Special purpose	General	Grants and contracts
FUND BALANCES--10/1/83....	\$ --	\$ 26,610	\$ 5,076	\$ --	\$ 13,863	\$ 7,421	\$ 250
FUNDS PROVIDED							
Federal Appropriations....	156,683	--	--	--	--	--	--
Investment Income.....	--	7,023	3,108	--	679	3,236	--
Grants and Contracts.....	--	14,876	--	--	--	--	14,876
Gifts.....	--	8,701	35	2,698	109	5,859	--
Sales and Revenue.....	--	114,852	--	112,179	2,673	--	--
Other.....	--	2,215	(6)	--	1,132	1,087	2
Total Provided.....	<u>156,683</u>	<u>147,667</u>	<u>3,137</u>	<u>114,877</u>	<u>4,593</u>	<u>10,182</u>	<u>14,878</u>
Total Available.....	<u>\$156,683</u>	<u>\$174,277</u>	<u>\$ 8,213</u>	<u>\$114,877</u>	<u>\$18,456</u>	<u>\$17,603</u>	<u>\$15,128</u>
FUNDS APPLIED							
Science:							
Assistant Secretary.....	524	512	28	--	38	117	320
Natl. Mus. of Nat. History/ Museum of Man.....	18,734	3,814	310	--	794	1,387	1,323
Astrophysical Observatory. Less Overhead Recovery..	7,441	15,300	2,244	--	646	222	12,188
Tropical Research Institute	--	(2,226)	(2,226)	--	--	--	--
Environmental Rsch. Center	3,424	784	103	--	413	264	4
Natl. Air & Space Museum..	3,098	481	74	--	90	19	298
Natl. Zoological Park.....	7,477	2,666	39	--	2,354	134	139
	<u>10,720</u>	<u>465</u>	<u>66</u>	<u>--</u>	<u>225</u>	<u>44</u>	<u>130</u>
Total Science.....	<u>51,418</u>	<u>21,796</u>	<u>638</u>	<u>--</u>	<u>4,560</u>	<u>2,187</u>	<u>14,411</u>
History and Art:							
Assistant Secretary.....	598	115	108	--	7	--	--
Natl. Mus. of Am. History.	9,637	1,217	245	--	643	325	4
Natl. Mus. of American Art	4,465	698	48	--	123	526	1
Natl. Portrait Gallery....	3,216	1,599	17	--	807	775	--
Hirshhorn Museum.....	2,851	93	9	--	73	11	--
Center for Asian Art.....	1,058	1,584	50	--	37	1,497	--
Archives of American Art..	693	929	1	--	--	928	--
Cooper-Hewitt Museum.....	843	2,055	739	--	1,022	195	99
Natl. Mus. of African Art.	1,043	210	73	--	104	33	--
Anacostia Museum.....	741	34	32	--	--	2	--
Total History and Art	<u>25,145</u>	<u>8,534</u>	<u>1,322</u>	<u>--</u>	<u>2,816</u>	<u>4,292</u>	<u>104</u>

TABLE 2 - continued

Source and Application of Operating Funds  
Year Ended September 30, 1984  
(Excludes Special Foreign Currency Funds, Plant Funds and Endowments)  
(In \$1,000s)

Funds	Nonfederal Funds						
	Federal funds	Total non-federal funds	Unrestricted			Restricted	
			General	Auxiliary activities	Special purpose	General	Grants and contracts
<b>Public Service:</b>							
Assistant Secretary.....	456	338	272	--	57	9	--
Reception Center.....	174	589	547	--	42	--	--
Telecommunications.....	221	716	465	--	200	51	--
Smithsonian Press.....	1,023	10,676	36	10,634	--	6	--
<b>Total Public Service.</b>	<b>1,874</b>	<b>12,319</b>	<b>1,320</b>	<b>10,634</b>	<b>299</b>	<b>66</b>	<b>--</b>
<b>Museum Programs:</b>							
Assistant Secretary.....	631	470	48	--	209	212	1
Registrar.....	90	--	--	--	--	--	--
Conserv. Analytical Lab. .	883	1	--	--	1	--	--
Libraries.....	3,726	337	309	--	11	17	--
Exhibits.....	1,413	(40)	--	--	(40)	--	--
Traveling Exhib. Service..	327	3,241	182	1,451	80	1,486	42
Archives.....	492	111	110	--	1	--	--
National Museum Act.....	785	--	--	--	--	--	--
<b>Total Museum Programs</b>	<b>8,347</b>	<b>4,120</b>	<b>649</b>	<b>1,451</b>	<b>262</b>	<b>1,715</b>	<b>43</b>
<b>Special Programs:</b>							
Am. Studies & Folklife Pgm.	594	801	474	--	7	37	283
Int. Environ. Science Pgm.	687	--	--	--	--	--	--
Academic & Educational Pgm.	717	1,666	251	--	1,282	133	--
Collections Mgt./Inventory.	879	--	--	--	--	--	--
Major Exhibition Program...	522	--	--	--	--	--	--
Museum Support Center.....	7,649	269	--	--	269	--	--
JFK Center Grant.....	1,000	--	--	--	--	--	--
<b>Total Special Programs</b>	<b>12,048</b>	<b>2,736</b>	<b>725</b>	<b>--</b>	<b>1,558</b>	<b>170</b>	<b>283</b>
Associate Programs.....	--	60,313	782	59,421	98	12	--
Business Management.....	--	24,280	--	24,280	--	--	--
Administration.....	12,099	8,288	7,985	78	106	119	--
Less Overhead Recovery..	--	(6,528)	(6,528)	--	--	--	--
Facilities Services.....	45,650	1,172	1,122	--	40	10	--

TABLE 2 - continued

Source and Application of Operating Funds  
 Year Ended September 30, 1984  
 (Excludes Special Foreign Currency Funds, Plant Funds and Endowments)  
 (In \$1,000s)

Funds	Nonfederal Funds						
	Federal funds	Total non-federal funds	Unrestricted			Restricted	
			General	Auxiliary activities	Special purpose	General	Grants and contracts
<b>Transfers Out/(In):</b>							
Treasury.....	102*	--	--	--	--	--	--
Coll. Acq., Schol. St., Outreach.....	--	--	2,250	--	(2,250)	--	--
Net Auxiliary Activities..	--	--	(18,375)	18,375	--	--	--
Other Designated Purposes.	--	--	4,541	638	(5,179)	--	--
Plant.....	--	3,424	3,400	--	24	--	--
Endowment.....	--	3,535	3,296	--	17	222	--
<b>Total Transfers.....</b>	<b>102</b>	<b>6,959</b>	<b>(4,888)</b>	<b>19,013</b>	<b>(7,388)</b>	<b>222</b>	<b>--</b>
<b>Total Funds Applied..</b>	<b>\$156,683</b>	<b>\$143,989</b>	<b>\$ 3,127</b>	<b>\$114,877</b>	<b>\$ 2,351</b>	<b>\$ 8,793</b>	<b>\$14,841</b>
<b>FUND BALANCES 9/30/84.....</b>	<b>\$ --</b>	<b>\$ 30,288</b>	<b>\$ 5,086</b>	<b>\$ --</b>	<b>\$16,105</b>	<b>\$ 8,810</b>	<b>\$ 287</b>

\*Unobligated funds returned to Treasury.



TABLE 3

Grants and Contracts — Expenditures  
(In \$1,000s)

Federal Agencies	FY 1982	FY 1983	FY 1984
Agency for International Development.....	\$ --	\$ --	\$ 428
Department of Commerce.....	174	(7)	57
Department of Defense.....	1,001	1,299	1,056
Department of Energy.....	448	358	227
Department of Health and Human Services.....	325	280	273
Department of Interior.....	268	238	204
National Aeronautics and Space Administration*.....	9,303	9,551	11,275
National Science Foundation**.....	1,079	928	820
Other.....	<u>837</u>	<u>415</u>	<u>501</u>
Total.....	<u>\$13,435</u>	<u>\$13,062</u>	<u>\$14,841</u>

\*Includes \$264,000 (FY 1982), \$197,000 (FY 1983), and \$399,000 (FY 1984) in subcontracts from other organizations receiving prime contract funding from NASA.

\*\*Includes \$230,000 (FY 1982), \$196,000 (FY 1983), and \$250,000 (FY 1984) in NSF subcontracts from the Chesapeake Research Consortium.

TABLE 4

**Restricted Operating Trust Funds\***  
Fiscal Years 1982-84  
(In \$1,000s)

Item	Invest- ment	Gifts	Miscel- laneous	Total Revenue	Deduc- tions	Trans- fers in (out)	Net in- crease (de- crease)	Fund bal- ance end of year
FY 1982 - Total.....	\$2,886	\$3,154	\$ 781	\$ 6,821	\$6,571	\$ (77)	\$ 173	\$5,719
FY 1983 - Total.....	\$2,971	\$5,419	\$ 772	\$ 9,162	\$6,823	\$(637)	\$1,702	\$7,421
FY 1984:								
National Museum of Natural History.....	\$1,150	\$ 837	\$ 107	\$ 2,094	\$1,387	\$ -	\$ 707	\$1,441
Astrophysical Observatory. Tropical Research Institute.....	91	122	-	213	222	-	(9)	(16)
National Air & Space Museum.....	44	195	-	239	264	-	(25)	235
National Zoological Park..	69	54	-	123	134	(25)	(36)	79
Other Science.....	19	69	-	88	44	-	44	149
National Museum of American History.....	139	130	-	269	136	(113)	20	582
National Museum of American Art.....	58	239	1	298	325	2	(25)	527
National Portrait Gallery.	66	522	9	597	526	-	71	480
Hirshhorn Museum.....	18	772	(2)	788	775	-	13	179
Center for Asian Art.....	70	11	-	81	11	-	70	736
Archives of American Art..	1,131	69	630	1,830	1,497	(15)	318	1,552
Cooper-Ile Witt Museum.....	45	778	320	1,143	928	-	215	530
Traveling Exhibition Service.....	72	238	-	310	195	-	115	693
All Other.....	79	1,415	-	1,494	1,486	-	8	930
	185	408	22	615	641	(71)	( 97)	713
Total FY 1984	\$3,236	\$5,859	\$1,087	\$10,182	\$8,571	\$(222)	\$1,389	\$8,810

\*Does not include federal agency grants and contracts.

TABLE 5

Unrestricted Trust Funds - General and Auxiliary Activities  
Fiscal Years 1982-1984  
(In \$1,000s)

Item	FY 1982	FY 1983	FY 1984
FUNDS PROVIDED			
General Income:			
Investments.....	\$ 2,921	\$ 2,489	\$ 3,108
Gifts.....	18	24	35
Miscellaneous.....	<u>83</u>	<u>46</u>	<u>(6)</u>
Total General Income.....	<u>3,022</u>	<u>2,559</u>	<u>3,137</u>
Auxiliary Activities Income (Net):			
Associates*.....	8,126	9,864	13,075
Business Management:			
--Museum Shops and Mail Order.....	856	2,710	3,711
--Concessions, Parking and Food Service....	1,513	1,670	1,691
--Other.....	(322)	(300)	(206)
Performing Arts*.....	(2,544)	--	--
Smithsonian Press*.....	670	232	1,158
Traveling Exhibitions.....	(298)	(363)	(421)
Photo Services.....	<u>11</u>	<u>19</u>	<u>5</u>
Total Auxiliary Activities.....	<u>8,012</u>	<u>13,832</u>	<u>19,013</u>
Total Funds Provided (Net).....	<u>11,034</u>	<u>16,391</u>	<u>22,150</u>
EXPENDITURES AND TRANSFERS			
Administrative and Program Expense.....	12,505	14,727	16,769
Less Administrative Recovery.....	<u>7,825</u>	<u>8,595</u>	<u>8,754</u>
Net Expense.....	<u>4,680</u>	<u>6,132</u>	<u>8,015</u>
Less Transfers:			
To Special Purpose for Program Purposes....	3,328	5,205	7,429
To Plant Funds.....	1,000	2,005	3,400
To Endowment Funds.....	<u>2,021</u>	<u>3,021</u>	<u>3,296</u>
NET ADDITION TO FUND BALANCE.....	<u>5</u>	<u>28</u>	<u>10</u>
ENDING FUND BALANCE.....	<u>\$ 5,048</u>	<u>\$ 5,076</u>	<u>\$ 5,086</u>

\*Effective FY 1983, the Division of Performing Arts recording program was transferred to the Smithsonian Press and the performing arts activities for which tickets are sold to the public were transferred to the Resident Associate Program.

TABLE 6

Auxiliary Activities Fiscal Years 1982-1984  
(In \$1,000s)

Activity	Sales and other revenue	Gifts	Less cost of sales	Gross revenue	Ex- penses	Net rev- enue** (loss)
FY 1982.....	<u>\$ 92,668</u>	<u>\$1,757</u>	<u>\$56,166</u>	<u>\$38,259</u>	<u>\$30,247</u>	<u>\$ 8,012</u>
FY 1983.....	<u>\$ 98,826</u>	<u>\$2,171</u>	<u>\$57,527</u>	<u>\$43,470</u>	<u>\$29,638</u>	<u>\$13,832</u>
FY 1984:						
Associates.....	\$ 69,798	\$2,698	\$46,127	\$26,369	\$13,294	\$13,075
Business Management:						
--Museum Shops*.....	26,762	-	14,752	12,010	8,299	3,711
--Concessions/Parking/ Food Services.....	2,617	-	45	2,572	881	1,691
--Other.....	97	-	-	97	303	(206)
Smithsonian Press.....	11,792	-	3,703	8,089	6,931	1,158
Traveling Exhibitions.....	1,030	-	671	359	780	(421)
Photo Services (Administration).....	<u>83</u>	<u>-</u>	<u>11</u>	<u>72</u>	<u>67</u>	<u>5</u>
Total FY 1984.....	<u>\$112,179</u>	<u>\$2,698</u>	<u>\$65,309</u>	<u>\$49,568</u>	<u>\$30,555</u>	<u>\$19,013</u>

\*Includes Museum Shops and Mail Order.

\*\*Before revenue-sharing transfers to participating Smithsonian bureaus of \$380,00 (FY 1982); \$486,000 (FY 1983); and \$638,000 (FY 1984).

TABLE 7

**Unrestricted Special Purpose Funds**  
**Fiscal Years 1982-1984**  
(In \$1,000s)

Item	Revenue			Deductions			Net increase (decrease)	Fund balance end of year	
	In-vestment	Bureau activities	Gifts and other revenue	Total revenue	Transfers in (out)	Program expense			Bureau activity expense
FY 1982.....	\$719	\$2,925	\$1,067	\$4,711	\$2,784	\$4,908	\$2,183	\$404	\$13,003
FY 1983.....	\$686	\$3,132	\$1,057	\$4,875	\$5,078	\$6,861	\$2,232	\$860	\$13,863
FY 1984:									
National Museum of Natural History.....	\$ 50	\$ 7	\$ 30	\$ 87	\$ 959	\$ 794	\$ -	\$ 252	\$ 854
Astrophysical Observatory..	10	137	65	212	502	491	155	68	679
Tropical Research Institute	22	131	-	153	234	193	220	(26)	153
National Air and Space Museum.....	243	1,400	35	1,678	73	1,433	921	(603)	1,993
Environmental Research Center.....	7	23	16	46	88	80	10	44	175
National Zoological Park...	210	-	200	410	90	225	-	275	2,310
National Museum of American History.....	23	13	85	121	566	638	5	44	482
National Museum of American Art.....	14	5	139	158	23	119	4	58	175
National Portrait Gallery..	5	9	58	72	743	799	8	8	135
Hirshhorn Museum.....	15	-	17	32	327	73	-	286	464
Cooper-Hewitt Museum.....	1	849	347	1,197	23	374	648	198	202
National Museum of African Art.....	-	7	6	13	18	101	3	(73)	48
Office of Telecommunications.....	-	3	-	3	19	167	33	(178)	274
Liability Reserves.....	-	-	-	-	-	16	-	(16)	3,273

TABLE 7 - continued

Unrestricted Special Purpose Funds  
Fiscal Years 1982-1984  
(In \$1,000s)

Item	Revenue				Deductions				Fund bal- ance end of year
	In- vest- ment	Bu- reau activi- ties	Gifts and other rev- enue	Total rev- enue	Trans- fers in (out)	Pro- gram ex- pense	Bu- reau activ- ity ex- pense	Net in- crease (de- crease)	
Unallocated Coll. Acq., Schol. Studies, and Outreach.....	-	-	-	-	133	-	-	133	570
Fellowships.....	24	-	-	24	1,363	1,194	-	193	1,034
Museum Support Center Equipment.....	-	-	-	-	-	269	-	(269)	401
All Other.....	55	89	243	387	2,227	739	27	1,848	2,883
<b>Total FY 1984.....</b>	<b>\$679</b>	<b>\$2,673</b>	<b>\$1,241</b>	<b>\$4,593</b>	<b>\$7,388</b>	<b>\$7,705</b>	<b>\$2,034</b>	<b>\$2,242</b>	<b>\$16,105</b>

TABLE 8

Special Foreign Currency Program  
 Fiscal Year 1984 - Obligations  
 (In \$1,000's)

Country	Archae- ology	System- atic and environ- mental biology	Astro- physics and earth sciences	Museum programs	Grant adminis- tration	Total
India.....	\$4,730	\$415	\$111	\$405	\$253*	\$5,914
Burma.....	1	3	--	--	--	4
Pakistan.....	<u>1,137</u>	<u>239</u>	<u>6</u>	<u>--</u>	<u>19</u>	<u>1,401</u>
Total.....	<u>\$5,868</u>	<u>\$657</u>	<u>\$117</u>	<u>\$405</u>	<u>\$272</u>	<u>\$7,319</u>

\*Includes \$180,000 for translation services in support of all programs.

TABLE 9

Construction and Plant Funds Fiscal Years 1982-1984  
(In \$1,000s)

Sources	FY 1982	FY 1983	FY 1984
<b>FUNDS PROVIDED</b>			
<b>Federal Appropriations:</b>			
National Zoological Park.....	\$ 1,104	\$ 1,550	\$ 3,500
Restoration and Renovation of Buildings.....	7,680	8,450	9,000
Quadrangle.....	<u>960</u>	<u>36,500</u>	<u>(8,000)</u>
Total Federal Appropriations.....	<u>9,744</u>	<u>46,500</u>	<u>4,500</u>
<b>Nonappropriated Trust Funds:</b>			
<b>Income--Gift and Other</b>			
Special Exhibits Gallery.....	1	--	--
Smithsonian Environmental Research Center--Gain on Sale.....	--	44	--
Smithsonian Tropical Research Institute--Research Facilities.....	--	66	20
Erection of Jacksonville Bandstand.....	--	174	12
Cooper-Hewitt Museum.....	31	163	32
American Art and Portrait Gallery Building.....	183	21	21
Quadrangle and Related.....	1,650	14,574	8,098
Smithsonian Institution Building South Entrance.....	64	5	3
Bequest of Real Estate.....	225	--	--
Belmont Conference Center--Gain on Sale.....	--	1,405*	--
Horticulture Antique Greenhouse.....	<u>--</u>	<u>--</u>	<u>16</u>
Total Income.....	<u>2,154</u>	<u>16,452</u>	<u>8,202</u>
<b>Transfers from Current Funds:</b>			
National Museum of African Art.....	24	24	24
Quadrangle.....	1,040	2,040	2,700
East Garden.....	--	5	--
Secretaries Residence.....	<u>--</u>	<u>--</u>	<u>700</u>
Total Transfers.....	<u>1,064</u>	<u>2,069</u>	<u>3,424</u>
Total Funds Provided.....	<u>\$12,962</u>	<u>\$65,021</u>	<u>\$16,126</u>

\*Total proceeds realized of \$1,993,000 of which \$1,750,000 was directed to construction of the Museum Support Center and \$208,000 was transferred to endowment funds.



TABLE 10

## Endowment and Similar Funds

September 30, 1984

	Book Value	Market Value
<b>ASSETS</b>		
Pooled Consolidated Endowment Funds:		
Cash and Equivalents.....	\$ 13,525,970	\$ 13,525,970
Bonds.....	11,346,884	11,431,145
Convertible Bonds.....	4,048,125	4,408,300
Stocks.....	<u>87,939,422</u>	<u>101,747,648</u>
Total Pooled Funds.....	<u>116,860,401</u>	<u>131,113,063</u>
Nonpooled Endowment Funds:		
Loan to U.S. Treasury in Perpetuity.....	1,000,000	1,000,000
Notes Receivable.....	41,946	41,946
Bonds.....	10,000	9,600
Common Stocks.....	1,999	12,000
Land.....	<u>239,000</u>	<u>239,000</u>
Total Nonpooled Funds.....	<u>1,292,945</u>	<u>1,302,546</u>
Total Endowment and Similar Fund Balances....	<u>\$118,153,346</u>	<u>\$132,415,609</u>
<b>FUND BALANCES</b>		
Unrestricted Purpose: True Endowment.....		
Quasi Endowment.....	\$ 3,953,128	\$ 5,014,889
	<u>49,312,990</u>	<u>52,728,976</u>
Total Unrestricted Purpose.....	<u>53,266,118</u>	<u>57,743,865</u>
Restricted Purpose: True Endowment.....		
Quasi Endowment.....	48,031,154	55,770,264
	<u>16,856,074</u>	<u>18,901,480</u>
Total Restricted Purpose.....	<u>64,887,228</u>	<u>74,671,744</u>
Total Endowment and Similar Fund Balances....	<u>\$118,153,346</u>	<u>\$132,415,609</u>

TABLE 11

Market Values of Pooled Consolidated Endowment Funds  
(In \$1,000's)

Fund	9/30/80	9/30/81	9/30/82	9/30/83	9/30/84
Unrestricted.....	\$28,384	\$30,399	\$35,974	\$ 54,677	\$ 56,592
Freer.....	20,771	20,472	22,596	32,096	31,125
Other Restricted.....	<u>28,175</u>	<u>27,101</u>	<u>30,288</u>	<u>43,911</u>	<u>43,396</u>
Total.....	<u>\$77,330</u>	<u>\$77,972</u>	<u>\$88,858</u>	<u>\$130,684</u>	<u>\$131,113</u>

TABLE 12

Changes in Pooled Consolidated Endowment Funds  
for Fiscal Year 1984  
(In \$1,000's)

Fund	Market value 9/30/83	Gifts and trans- fers	Interest and divi- dends*	Income paid out	Sub- total	Market value appre- ciation	Market value 9/30/84
Unrestricted.....	\$ 54,677	\$3,083	\$2,821	\$1,378	\$ 59,203	(\$2,611)	\$ 56,592
Freer.....	32,096	--	1,597	1,029	32,664	( 1,539)	31,125
Other Restricted....	<u>43,911</u>	<u>807</u>	<u>2,196</u>	<u>1,413</u>	<u>45,501</u>	<u>( 2,105)</u>	<u>43,396</u>
Total.....	<u>\$130,684</u>	<u>\$3,890</u>	<u>\$6,614</u>	<u>\$3,820</u>	<u>\$137,368</u>	<u>(\$6,255)</u>	<u>\$131,113</u>

\*Income earned, less managers' fees of \$546,041.

TABLE 13

## Endowment Funds

September 30, 1984

	Principal		Income	
	Book value	Market value	Net income	Unexpended balance
<b>UNRESTRICTED PURPOSE - TRUE:</b>				
Avery Fund*.....	\$ 131,518	\$ 170,081	\$ 4,735	\$ -0-
Higbee, Harry, Memorial.....	38,243	49,530	1,205	-0-
Hodgkins Fund*.....	226,558	243,573	10,860	-0-
Morrow, Dwight W. ....	228,867	304,678	7,415	-0-
Mussinán, Alfred.....	72,528	89,101	2,169	-0-
Olmsted, Helen A. ....	2,404	3,110	76	-0-
Poore, Lucy T. & George W.*.....	512,423	677,406	17,621	-0-
Porter, Henry Kirke, Memorial.....	846,465	1,125,065	27,382	-0-
Sanford, George H.*.....	3,784	4,644	160	-0-
Smithson, James*.....	567,676	566,646	36,809	-0-
Walcott, Charles D. and Mary Vaux, Research (Designated)*.....	<u>1,322,662</u>	<u>1,781,055</u>	<u>58,759</u>	<u>31,064</u>
Subtotal.....	<u>3,953,128</u>	<u>5,014,889</u>	<u>167,191</u>	<u>31,064</u>
<b>UNRESTRICTED PURPOSE - QUASI:</b>				
Forrest, Robert Lee.....	3,414,389	3,390,484	82,519	-0-
General Endowment*.....	41,529,143	44,823,288	1,059,803	-0-
Goddard, Robert H. ....	27,020	26,850	654	-0-
Habel, Dr. S.*.....	524	523	34	-0-
Hart, Gustavus E. ....	1,706	2,008	49	-0-
Henry, Caroline.....	4,225	4,955	121	-0-
Henry, Joseph and Harriet A. ....	170,033	198,214	4,824	-0-
Heys, Maude C. ....	327,238	329,912	8,030	-0-
Hinton, Carrie Susan.....	87,159	96,510	2,349	-0-
Lambert, Paula C. ....	156,692	177,060	4,309	-0-
Medinus, Grace L. ....	3,238	3,283	80	-0-
Rhees, William Jones*.....	2,263	2,539	87	-0-
Safford, Clara Louise.....	149,209	154,099	3,751	-0-
Smithsonian Bequest Fund*.....	677,280	700,361	13,501	-0-
Taggart, Ganson.....	1,434	1,878	46	-0-
Abbott, William L. (Designated)....	402,179	470,057	15,536	16,614
Barstow, Frederic D. (Designated)..	3,368	3,929	130	4,897
Lindbergh Chair of Aerospace History (Designated).....	1,563,652	1,628,013	53,808	72,714
Lindbergh, Charles A. (Designated).	12,628	14,278	1,296	7,965
Lyon, Marcus Ward, Jr. (Designated)	13,541	14,007	463	2,309
Webb, James E., Fellowship (Designated).....	<u>766,069</u>	<u>686,728</u>	<u>22,670</u>	<u>11,654</u>
Subtotal.....	<u>49,312,990</u>	<u>52,728,976</u>	<u>1,274,060</u>	<u>116,153</u>
Total Unrestricted Purpose.....	<u>\$ 53,266,118</u>	<u>\$ 57,743,865</u>	<u>\$1,441,251</u>	<u>\$ 147,217</u>

TABLE 13 - continued

## Endowment Funds

September 30, 1984

	Principal		Income	
	Book value	Market value	Net income	Unexpended balance
<b>RESTRICTED PURPOSE - TRUE:</b>				
Arthur, James.....	\$ 114,851	\$ 153,962	\$ 5,089	\$ 6,138
Baird, Spencer Fullerton.....	104,163	137,626	4,549	11,910
Barney, Alice Pike, Memorial.....	82,338	110,330	3,647	23,935
Batchelor, Emma E. ....	106,226	114,125	3,772	60,430
Beauregard, Catherine, Memorial....	132,066	154,177	5,096	42,024
Bergen, Charlotte V. ....	11,674	11,394	377	635
Brown, Roland W. ....	88,860	105,813	3,497	16,965
Canfield, Frederick A. ....	117,005	169,631	5,607	220
Casey, Thomas Lincoln.....	42,299	49,429	1,634	2,671
Chamberlain, Francis Lea.....	80,844	108,331	3,581	17,875
Cooper Fund for Paleobiology.....	83,569	84,367	2,732	-0-
Division of Mammals Curators Fund..	6,122	7,282	226	4,040
Drake Foundation.....	545,928	600,711	19,778	86,137
Drouet, Francis and Louderback, Harold B. Fund.....	175,273	171,812	830	18,992
Dykes, Charles, Bequest.....	158,678	181,773	6,008	38,674
Eickemeyer, Florence Brevoort.....	31,200	41,798	1,381	20,935
Freer, Charles L. ....	26,702,183	31,125,303	1,028,730	1,249,227
Grimm, Sergei N. ....	97,990	97,518	3,223	11,279
Groom, Barrick W. ....	52,723	48,658	1,206	994
Guggenheim, Daniel and Florence....	380,996	398,253	13,163	33,032
Hamilton, James*.....	3,815	4,283	226	1,288
Henderson, Edward P., Meteorite Fund.....	1,096	1,369	45	398
Hewitt, Eleanor G., Repair Fund....	22,847	25,039	828	-0-
Hewitt, Sarah Cooper.....	135,099	147,794	4,885	-0-
Hillyer, Virgil.....	22,180	25,921	857	11,211
Hitchcock, Albert S. ....	4,561	6,168	204	110
Hodgkins Fund*.....	104,830	104,644	6,818	33,107
Hrdlicka, Ales and Marie.....	160,959	191,677	6,335	6,951
Hughes, Bruce.....	54,978	73,720	2,437	20,537
Johnson, Seward, Trust Fund for Oceanography.....	11,045,313	12,945,474	427,883	108,753
Kellogg, Remington, Memorial.....	78,269	79,842	2,639	8,238
Kramar, Nada.....	8,898	10,077	333	2,849
Lindsey, Jessie H.*.....	12,248	12,142	1,155	7,989
Maxwell, Mary E. ....	56,335	75,532	2,496	23,283
Milliken, H. Oothout, Memorial.....	674	736	24	24
Mineral Endowment.....	305,920	339,220	11,212	303
Mitchell, William A. ....	41,670	46,405	1,534	2,343
Natural History and Conservation...	75,300	80,731	2,571	-0-
Nelson, Edward William.....	66,401	85,535	2,827	6,037

TABLE 13 - continued

## Endowment Funds

September 30, 1984

	Principal		Income	
	Book value	Market value	Net income	Unexpended balance
Petrocelli, Joseph, Memorial.....	21,324	28,650	947	25,070
Reid, Addison T.*.....	71,536	81,609	3,067	6,513
Roebing Fund.....	345,925	462,053	15,271	82
Rollins, Miriam and William.....	667,383	812,837	26,614	15,885
Shryock Endowment for Docents.....	-0-	-0-	49	-0-
Sims, George W. ....	58,999	56,727	1,830	1,516
Sprague Fund.....	4,415,010	4,860,495	159,141	42,310
Springer, Frank.....	51,747	68,949	2,279	27,204
Stern, Harold P., Memorial.....	461,817	512,004	16,453	46,880
Stevenson, John A., Mycological Library.....	16,212	18,837	623	1,430
Walcott, Charles D. and Mary Vaux, Research.....	429,518	511,841	16,727	13,440
Walcott Research Fund, Botanical Publications.....	163,589	214,597	7,093	19,401
Williston, Samuel Wendell, Diptera Research.....	8,996	9,438	299	1,100
Zerbee, Frances Brinckle.....	<u>2,717</u>	<u>3,625</u>	<u>120</u>	<u>4,530</u>
Subtotal.....	<u>48,031,154</u>	<u>55,770,264</u>	<u>1,839,948</u>	<u>2,084,904</u>
RESTRICTED PURPOSE - QUASI:				
Armstrong, Edwin James.....	10,125	10,962	356	-0-
Au Panier Fleuri.....	64,026	63,799	2,109	-0-
Bacon, Virginia Purdy.....	293,747	320,211	10,583	33,712
Becker, George F. ....	506,092	554,225	18,318	3,719
Desautels, Paul E. ....	36,534	42,266	1,371	-0-
Gaver, Gordon.....	3,972	4,507	149	3,296
Hachenberg, George P. and Caroline.....	13,933	16,847	557	1,209
Hanson, Martin Gustav and Caroline R. ....	29,993	35,038	1,158	5,785
Hunterdon Endowment.....	10,019,276	11,513,070	380,521	131,853
ICBP Endowment.....	582,335	596,758	18,023	-0-
ICBP Conservation Endowment.....	130,818	131,280	4,196	4,558
Johnson, E.R. Fenimore.....	25,183	25,942	857	2,254
Loeb, Morris.....	295,797	347,498	11,485	15,116
Long, Annette E. and Edith C. ....	1,578	2,146	71	290
Myer, Catherine Walden.....	68,169	79,642	2,632	11,546
Noyes, Frank B. ....	3,341	4,014	133	2,280
Noyes, Pauline Riggs.....	30,151	30,063	994	-0-
Pell, Cornelia Livingston.....	25,090	29,401	972	1,907
Ramsey, Adm. and Mrs. Dewitt Clinton*.....	965,910	1,007,242	33,249	6,030

TABLE 13 - continued

## Endowment Funds

September 30, 1984

	Principal		Income	
	Book value	Market value	Net income	Unexpended balance
Rathbun, Richard, Memorial.....	35,974	42,127	1,392	18,273
Roebing Solar Research.....	80,966	90,574	2,994	4,666
Ruef, Bertha M. ....	98,186	101,098	3,341	13,096
Schultz, Leonard P. ....	26,141	30,474	1,007	19,465
Seidell, Atherton.....	2,007,564	2,189,643	72,370	263,285
Smithsonian Agency Account.....	1,032,286	1,085,132	25,957	-0-
Strong, Julia D. ....	33,811	39,586	1,308	642
Witherspoon, Thomas A., Memorial...	435,076	507,935	16,788	9,195
Subtotal.....	<u>16,856,074</u>	<u>18,901,480</u>	<u>612,891</u>	<u>552,177</u>
Total Restricted Purpose.....	<u>\$ 64,887,228</u>	<u>\$ 74,671,744</u>	<u>\$2,452,839</u>	<u>\$2,637,081</u>
TOTAL ENDOWMENT FUNDS.....	<u>\$118,153,346</u>	<u>\$132,415,609</u>	<u>\$3,894,090**</u>	<u>\$2,784,298</u>

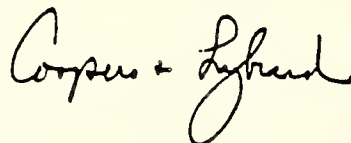
\*Invested all or in part in U.S. Treasury or other nonpooled investments.

\*\*Total Return Income payout; does not include \$215,411 of interest income for investment of unexpended income balances.

To the Board of Regents  
Smithsonian Institution

We have examined the statement of financial condition of the Smithsonian Institution as of September 30, 1984 and the related statement of financial activity for the year then ended. Our examination was made in accordance with generally accepted auditing standards and with generally accepted governmental auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We previously examined and reported upon the financial statements of the Smithsonian Institution for the year ended September 30, 1983, totals of which are included in the accompanying financial statements for comparative purposes only.

In our opinion, the financial statements for the year ended September 30, 1984, referred to above, present fairly the financial position of the Smithsonian Institution as of September 30, 1984, and the results of its operations and changes in its fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.



1800 M Street, N. W.  
Washington, D. C. 20036  
December 14, 1984



SMITHSONIAN INSTITUTION  
STATEMENT OF FINANCIAL CONDITION

September 30, 1984

(with comparative totals for September 30, 1983)  
(thousands of dollars)

	Trust funds	Federal funds	Totals, all funds	Totals, 1983
<b>Assets:</b>				
Cash on hand and in banks (Note 3)	\$ 3,827	\$ 10	\$ 3,837	\$ 1,971
Fund balances with U. S. Treasury (Note 4)	333	69,078	69,411	73,860
Investments (Notes 1 and 5)	166,806	-	166,806	144,518
Receivables (Note 7)	45,582	220	45,802	36,778
Advance payments (Note 8)	697	13,135	13,832	13,490
Merchandise inventory (Note 1)	8,902	-	8,902	8,459
Materials and supplies inventory (Note 1)	2,017	1,249	3,266	3,499
Amount to be provided for accrued annual leave (Note 1)	-	7,124	7,124	6,690
Prepaid and deferred expense (Note 1)	11,573	-	11,573	9,668
Property and equipment (Notes 1 and 9)	<u>23,234</u>	<u>184,967</u>	<u>208,201</u>	<u>197,516</u>
Total assets	<u>\$262,971</u>	<u>\$275,783</u>	<u>\$538,754</u>	<u>\$496,449</u>
<b>Liabilities:</b>				
Accounts payable and accrued expenses, including interfund payable of \$22,311 (Note 7)	\$ 34,889	\$ 10,202	\$ 45,091	\$ 39,096
Deposits held in custody for other organizations (Note 2)	3,042	42	3,084	2,187
Accrued annual leave (Note 1)	1,335	7,124	8,459	7,839
Deferred revenue (Note 1)	<u>24,815</u>	<u>-</u>	<u>24,815</u>	<u>22,015</u>
Total liabilities	<u>64,081</u>	<u>17,368</u>	<u>81,449</u>	<u>71,137</u>
Undelivered orders (Note 1)	<u>-</u>	<u>62,597</u>	<u>62,597</u>	<u>56,778</u>
<b>Fund balances (Note 1):</b>				
<b>Current:</b>				
Unrestricted general purpose	5,086	-	5,086	5,076
Special purpose	16,105	-	16,105	13,863
Restricted	9,097	-	9,097	7,671
Endowment and similar funds (Note 6)	118,153	-	118,153	103,009
Plant funds (Note 9)	<u>50,449</u>	<u>-</u>	<u>50,449</u>	<u>39,242</u>
Total trust fund balances	<u>198,890</u>	<u>-</u>	<u>198,890</u>	<u>168,861</u>
Operating funds	-	175	175	75
Construction funds	-	9,427	9,427	18,068
Capital funds	<u>-</u>	<u>186,216</u>	<u>186,216</u>	<u>181,530</u>
Total federal fund balances	<u>-</u>	<u>195,818</u>	<u>195,818</u>	<u>199,673</u>
Total all fund balances	<u>198,890</u>	<u>195,818</u>	<u>394,708</u>	<u>368,534</u>
Total liabilities, undelivered orders and fund balances	<u>\$262,971</u>	<u>\$275,783</u>	<u>\$538,754</u>	<u>\$496,449</u>

The accompanying notes are an integral part  
of the financial statements.

SMITHSONIAN INSTITUTION

STATEMENT OF FINANCIAL ACTIVITY

for the year ended September 30, 1984

(with comparative totals for the year ended September 30, 1983)  
(thousands of dollars)

	Trust funds		Federal funds				Totals, 1983		
	Total, trust funds	Current funds	Endowment and similar funds	Plant funds	Total, federal funds	Operating funds		Construction funds	Capital funds
Revenue and other additions:									
Appropriations, net (Note 10)	\$ -	\$ -	\$ -	\$ -	\$ 168,223	\$ 4,500	\$ -	\$ -	\$ 168,223
Auxiliary activities revenue	114,852	114,852	-	-	-	-	-	-	114,852
Federal grants and contracts	14,876	14,876	-	-	-	-	-	-	14,876
Investment income (net of \$546,000 for management and custodian fees)	11,902	9,842	-	2,060	-	-	-	-	11,902
Net gain on sale of securities and real property	8,505	-	8,505	-	-	-	-	-	8,505
Gifts, bequests and foundation grants	15,089	8,701	247	6,141	-	-	-	-	15,089
Additions to plant	4,054	-	-	4,054	19,079	-	-	19,079	23,133
Rentals, fees, commissions and other	3,019	2,983	36	-	112	-	-	-	3,131
Total revenue and other additions	172,297	151,254	8,788	12,255	187,414	4,500	19,079	19,079	359,711
Expenditures and other deductions:									
Research and educational expenditures	31,979	31,979	-	-	105,612	-	-	-	137,591
Administrative expenditures	11,014	11,014	-	-	12,371	-	-	-	23,385
Facilities services expenditures	1,172	1,172	-	-	45,650	-	-	-	46,822
Auxiliary activities expenditures	93,632	93,632	-	-	-	-	-	-	93,632
Acquisition of plant	3,797	-	-	3,797	13,141	-	-	-	16,938
Property use and retirements (Note 9)	650	-	-	650	14,393	-	-	-	15,043
Retirement of indebtedness	6	-	-	6	-	-	-	-	6
Interest on indebtedness	18	-	-	18	-	-	-	-	18
Total expenditures and other deductions	142,268	137,797	-	4,471	191,167	13,141	14,393	14,393	333,435
Excess of revenue and other additions over (under) expenditures and other deductions (Note 12)	30,029	13,457	8,788	7,784	(3,753)	202	(8,641)	4,686	26,276
Transfers among funds - additions (deductions):									
Mandatory principal and interest on notes	-	(24)	-	24	-	-	-	-	-
Nonmandatory for designated purposes, net (Note 13)	-	(9,755)	6,356	3,399	-	-	-	-	-
Total transfers among funds	-	(9,779)	6,356	3,423	-	-	-	-	-
Net increase (decrease) for the year	30,029	3,678	15,144	11,207	(3,753)	202	(8,641)	4,686	26,276
Returned to U. S. Treasury	-	-	-	-	(102)	(102)	-	-	(102)
Fund balances at beginning of year	168,861	26,610	103,009	39,242	199,673	75	18,068	181,530	368,534
Fund balances at end of year	\$ 198,890	\$ 30,288	\$ 118,153	\$ 50,449	\$ 195,818	\$ 175	\$ 9,427	\$ 186,216	\$ 394,708

The accompanying notes are an integral part of the financial statements.

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

1. Summary of significant accounting policies

Basis of presentation

These financial statements do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts or the Woodrow Wilson International Center for Scholars, which were established by Congress within the Smithsonian Institution (the Institution) but are administered under separate boards of trustees (see Note 2).

The accounts of the federal funds have been prepared on the obligation basis of accounting, which basis is in accordance with accounting principles prescribed by the Comptroller General of the United States as set forth in the Policy and Procedures Manual for Guidance of Federal Agencies. The obligation basis of accounting differs in some respects from generally accepted accounting principles. Under this basis of accounting, commitments of the operating fund, such as purchase orders and contracts, are recognized as expenditures, and the related obligations are reported on the balance sheet even though goods and services have not been received. Such commitments aggregated \$33,045,000 at September 30, 1984. In addition, construction commitments amounted to \$29,552,000 at September 30, 1984.

The trust funds reflect the receipt and expenditure of funds obtained from private sources, federal grants and contracts, investment income and certain business activities related to the operations of the Institution. The federal funds reflect the receipt and expenditures of funds obtained from Congressional appropriations.

Fund accounting

To ensure observance of limitations and restrictions placed on the use of resources available to the Institution, the accounts of the

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

Institution are maintained in accordance with the principles of fund accounting. This is the procedure by which resources for various purposes are classified for funds control, accounting and reporting purposes into funds established according to their appropriation, nature and purposes. Separate accounts are maintained for each fund; however, in the accompanying financial statements, funds that have similar characteristics have been combined into fund groups. Accordingly, all financial transactions have been recorded and reported by fund group.

The assets, liabilities and fund balances of the Institution are reported in self-balancing fund groups as follows:

Trust current funds, which include unrestricted and restricted resources, represent the portion of expendable funds that is available for support of Institution operations. Amounts restricted by the donor for specific purposes are segregated from other current funds.

Trust endowment and similar funds include funds that are subject to restrictions of gift instruments requiring in perpetuity that the principal be invested and the income only be used. Also classified as endowment and similar funds are gifts which allow the expenditure of principal but only under certain specified conditions and quasi-endowment funds. Quasi-endowment funds are funds established by the governing board for the same purposes as endowment funds; however, any portion of such funds may be expended. Restricted quasi-endowment funds represent gifts for restricted purposes where there is no stipulation that the principal be maintained in perpetuity or for a period of time, but the governing board has elected to invest the principal and expend only the income for the purpose stipulated by the donor.

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

Trust plant funds represent resources restricted for future plant acquisitions and funds expended for plant. Pledges for the construction of the Center for African, Near Eastern, and Asian Cultures are recorded as gifts in the plant fund in the period the pledge document is received.

Federal operating funds consist of separate subfund groups maintained for each appropriation - Salaries and Expenses appropriations, which are available for obligation in the current year only, Special Foreign Currency appropriations and Barro Colorado Island Trust Fund, for which unexpended funds from the current year can be carried forward and obligated in subsequent years.

Federal construction funds represent the portion of expendable funds that is available for building and facility construction, restoration, renovation and repair. Separate subfund groups are maintained for each appropriation - Construction and Improvements, National Zoological Park, Restoration and Renovation of Buildings, Museum Support Center and the Center for African, Near Eastern, and Asian Cultures (Quadrangle).

Federal capital funds represent the amount of the investment of the U. S. Government in the net assets of the Institution acquired with federal funds and nonexpendable property transfers from government agencies.

Investments

All gains and losses arising from the sale, collection or other disposition of investments and property are accounted for in the fund in which the related assets are recorded. Income from investments is accounted for in a similar manner, except for income derived from investments of endowment and similar funds, which is accounted for in the fund to which it is restricted or, if unrestricted, as revenue in unrestricted current

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

funds. Gains and losses on the sale of investments are recognized using the specific identification method, whereby the cost of the specific security adjusted by any related discount or premium amortization is the basis for recognition of the gain or loss.

Inventory

Inventories are carried at the lower of cost or market. Cost is determined using the first-in, first-out (FIFO) method, retail cost method (for those inventories held for resale) or net realizable value.

Deferred revenue and expense

Revenue from subscriptions to Smithsonian Magazine is recorded as income over the period of the related subscription, which is one year. Costs related to obtaining subscriptions to Smithsonian Magazine are charged against income over the period of the subscription.

The Institution recognizes revenue and charges expenses of other auxiliary activities during the period in which the activity is conducted.

Works of art, living or other specimens

The Institution acquires its collections, which include works of art, library books, photographic archives, objects and specimens, through purchase or by donation. In accordance with policies generally followed by museums, no value is assigned to the collections on the statement of financial condition. Purchases for the collections are expensed currently.

Property and equipment

Capital improvements and equipment purchased with trust funds and utilized in income-producing

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

activities are capitalized at cost and are depreciated on a straight-line basis over their estimated useful lives of 3 to 10 years. Equipment purchased with trust funds for use by nonincome-producing activities is treated as a deduction of the current fund and a capitalized cost of the plant fund. Depreciation on equipment capitalized in the plant fund is recorded on a straight-line basis over the estimated useful life of 3 to 10 years (see Note 9). Equipment purchased with federal funds is recorded at cost and depreciated on a straight-line basis over a period of 10 years.

Real estate (land and buildings) purchased with trust funds is recorded at cost, to the extent that restricted or unrestricted funds were expended therefor, or appraised value at date of gift, except for gifts of certain islands in the Chesapeake Bay and the Carnegie Mansion, which have been recorded at nominal values. Costs of original building structures and major additions are depreciated over their estimated useful lives of 30 years. Costs of renovating, restoring and improving structures are depreciated over their estimated useful lives of 15 years (see Note 9).

Buildings and other structures, additions to buildings and fixed equipment purchased with federal funds are recorded at cost and depreciated on a straight-line basis over a period of 30 years. Costs of renovating, restoring and improving structures are depreciated over their useful lives of 15 years.

Certain lands occupied by the Institution's buildings were appropriated and reserved by Congress for that purpose and are not reflected in the accompanying financial statements. Property and nonexpendable equipment acquired through transfer from government agencies are capitalized at the transfer price or at estimated amounts, taking into consideration their usefulness, condition and market value.

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

Government grants and contracts

The Institution has a number of grants and contracts with the U. S. Government, which primarily provide for cost reimbursement to the Institution. Grant and contract revenue is recognized when billable or received in the trust funds.

Contributed services

A substantial number of unpaid volunteers have made significant contributions of their time in the furtherance of the Institution's programs. The value of this contributed time is not reflected in these statements since it is not susceptible to objective measurement or valuation.

Annual leave unfunded

The Institution's civil service employees earn annual leave in accordance with federal law and regulations. However, only the cost of leave taken as salaries is funded and recorded as an expense. The cost of unused annual leave at year-end is reflected in the accompanying financial statements as an asset and accrued liability in the federal funds.

2. Related activities

The Institution provides fiscal and administrative services to several separately incorporated organizations in which certain officials of the Institution serve on the governing boards. The amounts paid to the Institution by these organizations for the aforementioned services, together with rent for Institution facilities occupied, etc. totaled approximately \$355,000 for the year ended September 30, 1984. Deposits held in custody for these organizations are \$3,029,000 as of September 30, 1984.

The following summarizes the approximate expenditures of these organizations for the fiscal year ended September 30, 1984 as reflected in their individual

Continued



SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

financial statements and which are not included in the accompanying financial statements of the Institution:

	<u>(\$000s)</u>
Visions Foundation, Inc.	\$ 128
Reading Is Fundamental, Inc.	\$6,400
Woodrow Wilson International Center for Scholars:	
Trust funds	\$4,100
Federal appropriations	\$2,568

3. Cash on hand

Cash on hand - federal funds represents the amount of imprest fund cash advanced by the U. S. Treasury to imprest fund cashiers for small purchasing purposes.

4. Fund balances with U. S. Treasury

The account represents fund balances on the books of the U. S. Treasury available for disbursement.

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

5. Investments

Investments are recorded at cost, if purchased, or estimated fair market value at date of acquisition, if acquired by gift. At September 30, 1984, investments were composed of the following:

	<u>Carrying value (\$000s)</u>	<u>Market value (\$000s)</u>
Current funds:		
Certificates of deposit	\$ 12,252	\$ 12,254
Commercial paper	3,949	3,940
U. S. Government and quasi- government obligations	33,701	33,084
Common stock	28	9
Preferred stock	<u>30</u>	<u>57</u>
	<u>49,960</u>	<u>49,344</u>
Endowment and similar funds:		
Money market account	12,367	12,367
Deposit with U. S. Treasury	1,000	1,000
U. S. Government and quasi- government obligations	10,028	10,063
Corporate bonds	5,377	5,786
Common stock	84,927	99,479
Preferred stock	<u>3,015</u>	<u>2,282</u>
	<u>116,714</u>	<u>130,977</u>
Plant funds:		
U. S. Government and quasi- government obligations	32	29
Common stock	<u>100</u>	<u>-</u>
	<u>132</u>	<u>29</u>
	<u>\$166,806</u>	<u>\$180,350</u>

Since October 1, 1982, the deposit with the U. S. Treasury has been invested in U. S. Government securities at a variable yield based on market interest rates.

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

Substantially all the investments of the endowment and similar funds are pooled on a market value basis (consolidated fund) with each individual fund subscribing to or disposing of units on the basis of the value per unit at market value at the beginning of the month within which the transaction takes place. Of the total units, each having a market value of \$203.92, 293,996 units were owned by endowment and 348,976 units were owned by quasi-endowment at September 30, 1984.

The following tabulation summarizes changes in relationships between cost and market values of the pooled investments:

	<u>Market</u>	(\$000s) <u>Cost</u>	<u>Net change</u>	Market value per unit
End of year	\$131,113	\$116,860	\$ 14,253	\$203.92
Beginning of year	\$130,684	\$101,672	<u>29,012</u>	210.27
Increase (de- crease) in unrealized net gain for the year			(14,759)	-
Realized net gain for the year			<u>8,505</u>	<u>-</u>
Total realized and unreal- ized net gain (loss) for the year			<u>\$ (6,254)</u>	<u>\$ (6.35)</u>

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

6. Endowment and similar funds

Endowment and similar funds at September 30, 1984 are summarized as follows:

	<u>(\$000s)</u>
Endowment funds, income available for:	
Restricted purposes	\$ 48,031
Unrestricted purposes	<u>3,953</u>
	<u>51,984</u>
Quasi-endowment funds, principal and income available for:	
Restricted purposes	16,856
Unrestricted purposes	<u>49,313</u>
	<u>66,169</u>
Total endowment and similar funds	<u>\$118,153</u>

The Institution utilizes the "total return" approach to investment management of endowment funds and quasi-endowment funds. Under this approach, the total investment return is considered to include realized and unrealized gains and losses in addition to interest and dividends. An amount equal to the difference between interest and dividends earned during the year and the amount computed under the total return formula is transferred to or from the current funds.

In applying this approach, it is the Institution's policy to provide, as being available for current expenditures, an amount taking into consideration such factors as, but not limited to: (1) 4-1/2% of the five-year average of the market value of each fund (adjusted for gifts and transfers during this period), (2) current dividend and interest yield, (3) support needs for bureaus and scientists, and (4) inflationary factors as measured by the Consumer Price Index; however, where the market value of the assets of any endowment fund is less than 110% of the historic dollar value (value of gifts at date of donation), the amount provided is limited to only interest and dividends received. The total return factor for 1984 was \$6.74

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

per unit to the Restricted and Designated Purpose Endowment Funds and \$5.00 per unit to the Unrestricted General Purpose Endowment Funds; new units were purchased for the Unrestricted Endowment Funds with the \$1.74, the difference in the total return factor. The total return applied for 1984 was \$2,594,000 to the Restricted and Designated Purpose Endowment Funds and \$1,226,000 to the Unrestricted General Purpose Endowment Funds.

7. Receivables

Receivables at September 30, 1984 included the following:

	<u>(\$000s)</u>
<u>Trust funds</u>	
Accounts receivable, auxiliary activities; net of allowance for doubtful accounts of \$919,000	\$ 9,136
Interfund receivables due from current funds:	
Endowment and similar funds	1,156
Plant funds	21,155
Interest and dividends receivable	2,036
Unbilled costs and fees from grants and contracts	942
Pledges	11,102
Other	<u>55</u>
	45,582
<u>Federal funds</u>	
Service fees and charges	<u>220</u>
Total, all funds	<u><u>\$45,802</u></u>

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

8. Advance payments

Advance payments represent advances made to government agencies, educational institutions, firms and individuals for services to be rendered or property or materials to be furnished.

As of September 30, 1984, the Institution had advances outstanding to the U. S. Government of approximately \$10,807,000, principally for construction services to be received in the future. The Institution at that date also had advances outstanding to educational institutions amounting to approximately \$1,420,000, principally under the Special Foreign Currency Program.

9. Property and equipment

At September 30, 1984, property and equipment which have been capitalized (see Note 1) are comprised of the following:

	(\$000s)
<u>Trust</u>	
<u>Current funds</u>	
Capital improvements	\$ 4,452
Equipment	3,892
Leasehold improvements	235
Less accumulated depreciation and amortization	(3,832)
	4,747
<u>Endowment and similar funds</u>	
Land	239

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

	<u>(\$000s)</u>	<u>(\$000s)</u>
<u>Plant funds</u>		
Land and buildings	\$ 21,984	
Equipment	2,389	
Less accumulated depreciation	<u>(6,125)</u>	
	<u>18,248</u>	
Total, trust funds		<u>\$ 23,234</u>
 <u>Federal</u>		
<u>Capital funds</u>		
Property	263,226	
Equipment	24,758	
Less accumulated depreciation	<u>(103,017)</u>	
Total, federal funds		<u>184,967</u>
Total, all funds		<u>\$208,201</u>

Depreciation and amortization expense for 1984 for trust funds' income-producing assets amounted to approximately \$957,000, which is included in auxiliary activities expenditures in the current funds. Depreciation of trust funds' nonincome-producing equipment and buildings for 1984 amounted to approximately \$650,000.

Depreciation expense reflected in expenditures of the federal capital funds for 1984 was \$11,437,000.

The balance of the plant fund at September 30, 1984 included \$32,201,000 of unexpended plant funds.

10. Appropriations

For the year ended September 30, 1984, the Institution was awarded \$12,500,000 for various construction projects. Funds appropriated in the prior year for Quadrangle construction were reduced in fiscal year 1984 by \$8,000,000.

Continued

SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

---

11. Pension plan

The Institution has separate retirement plans for trust and federal employees. Under the trust fund's plan, both the Institution and employees contribute stipulated percentages of salary which are used to purchase individual annuities, the rights to which are immediately vested with the employees. The cost of the plan for the year ended September 30, 1984 was \$3,195,000. It is the policy of the Institution to fund plan costs accrued currently. There are no unfunded prior service costs under the plan.

The federal employees of the Institution are covered by the Civil Service Retirement Program. Under this program, the Institution withholds from the gross pay of each federal employee and remits to the Civil Service Retirement and Disability Fund (the Fund) the amounts specified by such program. The Institution contributes 7% of basic annual salary to the Fund. The cost of the plan for the year ended September 30, 1984 was approximately \$5,900,000.

12. Excess of expenditures and other deductions

The net excess of expenditures and other deductions over revenue and other additions disclosed for federal construction funds in the Statement of the Activity for the year ended September 30, 1984 arose because certain appropriations, having been recorded as revenue and other additions in prior years and carried forward as fund balance, were expended during the year. Additionally, funds appropriated in the prior year were reduced in fiscal year 1984 (see Note 10).

Continued



SMITHSONIAN INSTITUTION  
NOTES TO FINANCIAL STATEMENTS

13. Nonmandatory transfers for designated purposes

The following transfers among trust funds were made for the year ended September 30, 1984 in thousands of dollars:

	<u>Current funds</u>		<u>Endowment and similar funds</u>	<u>Plant funds</u>
	<u>Unrestricted</u>	<u>Restricted</u>		
Portion of investment yield appropriated (Note 6)	\$(1,466)	\$(1,353)	\$2,819	\$ -
Plant acquisitions	(3,400)	-	-	3,400
Income added to endowment principal	-	(190)	190	-
Appropriated as quasi- endowment	<u>(3,313)</u>	<u>(33)</u>	<u>3,347</u>	<u>(1)</u>
Total	<u>\$(8,179)</u>	<u>\$(1,576)</u>	<u>\$6,356</u>	<u>\$3,399</u>

14. Income taxes

The Institution is exempt from income taxation under the provisions of Section 501(c)(3) of the Internal Revenue Code. Organizations described in that section are taxable only on their unrelated business income, which was immaterial for the Institution for 1984.

It is the opinion of the Institution that it is also exempt from taxation as an instrumentality of the United States as defined in Section 501(c)(1) of the Code. Organizations described in that section are exempt from all income taxation. The Institution has not as yet formally sought such dual status.





SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01683 3006