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DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES APPROPRIATIONS FOR 1988

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON THE DEPARTMENT OF THE INTERIOR AND RELATED AGENCIES

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Staff Assistants

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THURSDAY, MARCH 12, 1987.

SMITHSONIAN INSTITUTION

WITNESSES

ROBERT McC. ADAMS, SECRETARY

DEAN W. ANDERSON, UNDER SECRETARY

DAVID CHALLINOR, ASSISTANT SECRETARY FOR RESEARCH

TOM L. FREUDENHEIM, ASSISTANT SECRETARY FOR MUSEUMS

JOHN F. JAMESON, ASSISTANT SECRETARY FOR ADMINISTRATION

RALPH RINZLER, ASSISTANT SECRETARY FOR PUBLIC SERVICE

JOHN E. REINHARDT, DIRECTOR, DIRECTORATE OF INTERNATIONAL ACTIVITIES

ANN R. LEVEN, TREASURER

RICHARD L. SIEGLE, DIRECTOR, OFFICE OF FACILITIES SERVICES

MICHAEL H. ROBINSON, DIRECTOR, NATIONAL ZOOLOGICAL PARK

NANCY D. SUTTENFIELD, DIRECTOR, OFFICE OF PROGRAMMING AND BUDGET

OPENING STATEMENT

Mr. YATES. The hearing will come to order.

This is the hearing for fiscal year 1988 for the Smithsonian Institution. We are delighted to have as the chief witness the distinguished Secretary of the Institution, Robert McCormack Adams. He is accompanied by certain body guards, Mr. Dean Anderson, who is the Under Secretary; David Challinor, Assistant Secretary for Research; Tom Freudenheim, Museums; Jameson for the money; Rinzler for Public Service; Reinhardt for International Affairs; Ms. Leven, the Treasurer; Richard Siegle, Facilities; Mr. Robinson, who is the new Director of the zoo, relatively new; and Ms. Sutzenfield, Director of Programming and Budget.

The biographies of Ms.—before that, I want to put Mr. Adams' statement into the record to be followed by the biographies of Ms. Sutzenfield and Mr. Siegle.

[Statement and biographies follow:]

STATEMENT OF ROBERT McC. ADAMS
SECRETARY, SMITHSONIAN INSTITUTION
ON APPROPRIATIONS REQUESTED FOR FY 1988

Mr. Chairman and Members of the Subcommittee:

It is a pleasure to come before the Subcommittee today to discuss the FY 1988 budget priorities for the Smithsonian. In order to place these priorities in their proper perspective, I would like to begin my statement with a brief review of some of the major milestones and accomplishments that we have recently witnessed or that will take place before FY 1987 draws to a close.

First of all, Mr. Chairman, I am pleased to report on the Quadrangle. Ceremonies inaugurating the Enid A. Haupt Garden south of the Smithsonian "Castle" will be held in late spring, and the garden will be open to the public throughout the summer. On September 28, the museums and other elements of the Quadrangle complex will open to the public; the President has been invited to officiate at the opening ceremony. An inaugural series of symposia, lectures, concerts, and receptions will introduce the programs of the Quadrangle to the Regents, members of Congress, Washington's official international community, donors, special guests and the general public. Major exhibitions will be presented by the Sackler Gallery, the National Museum of African Art, and the International Center; each bureau also will sponsor a wide range of public and scholarly programs to complement these exhibitions. The opening of the Quadrangle culminates a decade of planning and construction, accomplished with your support, that will bring greater visibility to the international research, museum, and public service programs of the Institution.

For three days this past September, hundreds of scientists, policy makers, and members of the public met at the Smithsonian's National Museum of Natural History and the National Academy of Sciences for a National Forum on Biological Diversity. Unprecedented in its scope, the Forum allowed its participants to explore the scientific significance of biological diversity and to analyze the factors that threaten its future. Overwhelmingly in agreement that diversity is fundamental to life on earth, the gathering provided an opportunity to examine the consequences of increasing worldwide development against the backdrop of functioning biological systems. The direct result was a greater appreciation by the American public of this important subject, not only as a research topic, but also as an emerging issue warranting international political attention. We are, indeed, grateful for the support that Congress has shown for our programs that investigate various aspects and implications of biological diversity.

In November of 1986, the Institution closed the Rockville branch of the Environmental Research Center. As the Subcommittee knows, SERC-Rockville was

for many years a substantial contributor to studies of plant physiology and cellular development. However, the specialties of this unit were subsumed over time by broader areas of scientific research. Following extensive outside review, the decision was made to cease activities at Rockville, but to retain certain high priority efforts under new administrative and scientific direction and to reprogram the bulk of the monies in support of other biological activities occupying a more central and urgent place in the programs of the Institution. In a time of limited resources the Institution must make hard decisions about priorities. We recognize the consultative role of the Congress in these decisions and seek its understanding of the need for flexibility to transfer resources to new targets of opportunity.

We have made several important strides in our collections acquisition and exhibition efforts thus far this year. "Engines of Change," an exciting new exhibition at the National Museum of American History on the American Industrial Revolution, is accompanied by a book of the same title, written by staff curators and published by the Smithsonian Institution Press. We have great pride in the fact that the book has been nominated for a Pulitzer Prize. After months of negotiation, the National Museum of American Art was able to consummate an agreement to acquire a renowned collection of American folk art amassed by Herbert Waide Hemphill, Jr. Purchase of this collection of some 378 objects was made possible through the partial donation of the objects by Mr. Hemphill and trust funds of the Museum which were earmarked for the purchase of works for the NMAA collection. In late 1986, the Smithsonian Institution Traveling Exhibition Service (SITES) successfully launched a tour of Russian paintings from 1850-1910 in the United States and a reciprocal tour in the Soviet Union of works from the United States. In addition, we will soon celebrate the re-opening of the Anacostia Museum at its new location, bringing together for the first time all of its exhibits and other staff in the expanded facility at Fort Stanton Park.

Turning to the subject of public access, I am pleased to report that the Institution will reinstate the practice of keeping the major museums open late during the week after Easter and during the summer of 1987. While recognizing the value to the public of our extended hour program, we are presently having difficulties in maintaining adequate guard coverage during regular hours. Frequently exhibit areas must be closed to the public. Given the choice between using base dollars for extended hours security or for daytime coverage for our primary audience, we would choose the latter use; a provision to redirect base funds is in our FY 1988 budget.

The Subcommittee will be interested, I'm sure, to know that the Institution has made progress in removing PCB filled transformers in its buildings. We have begun to retrofill two PCB transformers at the National Air and Space Museum with a liquid that is not harmful to people or to the environment. Three transformers have been replaced at the Smithsonian Institution Building. Later this spring the design will be complete and a contract awarded to replace the transformers at the American Art/Portrait Gallery Building. Replacement of transformers in the Freer Gallery of Art will be accomplished during the planned renovation of the building and construction of the link to the Quadrangle beginning in the fall of 1987. Replacement of all other PCB filled transformers will be completed by spring 1989.

We have recently opened bids for construction of the Tupper Laboratory

and Conference Center at the Tropical Research Institute -- a facility for which funds were appropriated last year. The contract is expected to be awarded shortly, and construction will begin in April. We have also received bids for construction of the restaurant at the National Air and Space Museum, which will be financed with non-federal funds of the Institution. A contract award was made last week, with groundbreaking also in April. The restaurant should be completed in FY 1988.

The Institution is currently conducting a comprehensive evaluation of the repair and restoration needs of its facilities. One of the primary goals of the inspection program is to establish the magnitude of the backlog of essential repair and maintenance confronting us. Projects in excess of \$200 million have already been identified to repair or replace building components and systems, bring the buildings up to safety and health codes, and arrest deterioration or otherwise assure long term preservation of the buildings.

To distinguish major repairs and renovations required to renew existing facilities from renovations undertaken for otherwise routine or programmatic reasons, we have initiated discussions with the Office of Management and Budget (OMB) about establishing a separate account designated "Major Capital Renewal" and for which we would seek authorization and funding in FY 1989. An initial Major Capital Renewal project would be the replacement of the 23 year old heating, ventilation and air conditioning system at the National Museum of Natural History, the total cost of which is estimated at \$100 million. A plan has been developed to phase construction over 14 years in order to avoid disruption of programs and activities or closing of the Museum.

In FY 1987 we have been able to initiate or supplement a number of high priority programs, because of the continued vitality of our auxiliary activities, such as the Associates, Smithsonian magazine, mail order, museum shops, records and books. This support extends to virtually all programmatic areas of the Institution, and includes funds for scholarly studies and fellowships, special exhibition and collections acquisition programs, and various educational outreach programs. Approximately \$27 million in unrestricted funds will be available this year for these and other priority programs ranging in size from a \$14,000 scientist exchange program with China to \$826,000 for on-going operations of the Visitor Information and Associates Reception Center. We have also provided start-up funds in FY 1987 for a University of the Air, research on the evolution of terrestrial ecology, and an educational resource center at the National Air and Space Museum. Many other examples are included for your information in our budget justification.

Mr. Chairman, this is a brief update of where we stand in FY 1987. Let me now turn to a brief summary of the philosophy and approach we have followed in our internal deliberations on the FY 1988 budget. As we considered the many competing priorities, the ever-present spectre of Federal deficits was before us. We have sought to prepare a budget that realistically takes into account the present budget environment.

In this environment, we have given top priority to covering uncontrollable expenses and those activities required by law. The remainder of the budget has

been structured to allow limited program growth in those areas of critical importance to the Institution. In addition, through a careful assessment of our base resources, we have sought every opportunity to redirect funds, from low priority activities and from certain nonrecurring costs, to new requirements, to higher priority activities, to promising new initiatives, and to support functions where troublesome budget deficiencies have existed for some time.

Efforts have also been made to ensure that we could provide an environment in which to foster important new research, maintain accountability for the collections, and establish those safety and security programs required by statute and regulation. Without a careful balance between the resources dedicated to these various efforts, it will be difficult to fulfill effectively our mandate to increase and diffuse knowledge in the years ahead. Having followed this approach, we are convinced that the Smithsonian Institution's FY 1988 budget request is realistic in the current era of constrained Federal resources.

In the Salaries and Expenses account we have requested a sum of \$204.9 million. Attached to my statement submitted for the record is a detailed listing of each of our requested increases. In the interest of time, I will highlight the major components of our request.

My highest priority continues to be to strengthen research activities and related support for them. As noted earlier in this statement, this budget includes a redirection of funds from the closure of the Smithsonian Environmental Research Center's Rockville facility to provide a molecular capability in the Institution aimed at enhancing systematic and evolutionary biology. This new emphasis on molecular biology will blend the latest research techniques with the Institution's scientific efforts. Another research-related priority is the request for funds to furnish and maintain the Tropical Research Institute's new Tupper Laboratory and Conference Center, which will become operational by the end of FY 1988.

Also very high as a research priority in this budget is the request for additional staff to support new facilities at the National Zoological Park and to meet our obligation to providing safe and healthy care for the animal collection. With other funds requested in this budget we also plan to undertake a new research initiative in the areas of Arctic anthropology, archeology, and biology at the National Museum of Natural History. Research will be conducted by a National Arctic Studies Center -- a direct response to the Arctic Research and Policy Act of 1984 and concerns raised about the effects of economic development, urbanism, and communication on the Arctic region. In addition, the budget includes a request for the Smithsonian Astrophysical Observatory (SAO) to develop further technology for submillimeter receivers and to build receivers for use on existing telescopes. Funds are also requested for SAO to initiate work to upgrade its Multiple Mirror Telescope at Mount Hopkins, Arizona. Over the next several years, the current six mirror telescope will be converted, using new technology, to a much larger single-mirror telescope that will allow the Smithsonian Institution to retain its leadership in optical astronomy.

We cannot overlook our public obligation to be accountable at all times for the collections entrusted to our care. In recognition that collections are the

foundation of research and museum work, we have also made provision in this budget for additional enhancements to base level inventory programs which have been established at the National Museum of Natural History (NMNH) and the National Museum of American History (NMAH) over the last several years. The enhancement of the base program at NMNH is essential to increase the level of refinement of the current inventory, while the enhancement for NMAH is important in that museum's efforts to eliminate the continually growing backlog of inventory records. We also have requested additional funds for the National Museum of Natural History to expand further automated inventory management and to pay related computer usage costs, and for the Freer Gallery of Art for collection storage equipment and furnishings.

The Smithsonian's FY 1988 budget request also emphasizes health, safety, and facilities issues. Specifically, the Office of Environmental Management and Safety is requesting new funds to address requirements related to the disposal of hazardous waste, asbestos abatement, fire protection and prevention, and hazard communication. We plan to strengthen our safety programs, as well as our facilities maintenance, planning and plant services programs through increased automation. We also must have additional staff to accompany the automated support for the Office of Facilities Services. Through additional personnel and automation, that Office will provide strengthened planning capability as we define short- and long-term physical requirements, assess alternatives and develop preliminary plans and cost estimates as necessary facilities modifications and additions are identified.

The FY 1988 budget request also gives high priority to ensuring that an adequate level of resources is made available in several other important support areas. For the past two years, the budget for the Office of Accounting and Financial Services has been inadequate to cover the actual costs of computer usage. The problem will worsen in FY 1988 if not addressed, since acquisition of new financial systems will require parallel processing for a period of three to six months. Second, in addition to funds redirected from within base resources to address the full staffing requirements of the Office of Protection Services, we are also requesting funds to eliminate a serious long-term imbalance in the resources available to adequately operate, maintain and service the Smithsonian's various facilities. Similarly, for each of the past five years, we have repeatedly found it necessary to reprogram funds to the Office of Plant Services from research, collections management, exhibitions and other public service programs to pay actual operating costs.

Funds requested in this budget will establish the necessary base for a fully operational level of program and support efforts associated with the Quadrangle. I would specifically call your attention to the need to create a stable funding base for the Directorate of International Activities. I am convinced, and hope you will agree, that the Institution must endeavor in the years ahead to ensure greater international emphases and balance among its various programs.

To plan and prepare exhibitions and events to commemorate the Bicentennial of the Constitution and the Columbus Quincentenary, the Smithsonian had some base funds provided for these purposes. However, in order to offer a full range

of activities and events to celebrate these two important historic milestones, additional funds are requested to support a variety of programs at several of the Institution's museums and galleries.

The FY 1988 budget also contemplates additional support for educational outreach programs. With funds requested in this budget, the newly established National Science Resources Center, developed in conjunction with the National Academy of Sciences, will work in collaboration with state and local school systems, science museums, professional and scientific organizations, and scientists from universities and industry to organize programs to improve the teaching of science and mathematics. We believe that the Smithsonian is in a position to play an important national role in strengthening elementary and secondary education programs -- a matter of increasing concern among policy makers and educators over the past several years.

Finally, we seek the necessary funds to finance costs beyond our control that include legislated pay raises, workers' compensation, increases associated with the new Federal Employees Retirement System, utilities, and rent. I should mention one recent development in this area of our budget that gives us some concern. After we delivered our budget to Congress in January, we learned that OMB had recommended a change in the way funds for water and sewer payments to the District of Columbia should be appropriated. Instead of appropriating these funds in a lump sum to the District on behalf of users, OMB is recommending that effective in FY 1988 individual users make payments to the District based upon actual usage. We understand that the budget for the General Services Administration includes additional funds for facilities under their purview, but other government organizations that occupy their own facilities were overlooked. We are in the process of developing an estimate of this new cost.

The Smithsonian is requesting \$14,254,000 in Restoration and Renovation funds, much of which is required to address only the most urgent of our ever growing backlog of serious facilities maintenance needs. Included in the request are projects estimated at \$1 million or more for the National Museum of American History, the Smithsonian Institution Building, and the Tropical Research Institute. Also included in this figure is the second installment of \$1,900,000 required to complete the replacement of all electrical transformers at the Institution which contain PCBs.

In the Construction account, we are requesting \$4,470,000 to construct a new base camp that is more accessible to the Whipple Observatory. You will recall that this facility was authorized last year in Public Law 99-423, our "Science Facilities Bill." This base camp will be the operational and logistical headquarters for the scientists who work at the observatory on Mount Hopkins.

The request for the Construction and Improvements, National Zoological Park account, includes funding for the renovation of the final section of the Olmsted Walk prior to the 100th anniversary of the Zoo in 1989 and other renovation, repair, and preventive maintenance projects at the Rock Creek and Front Royal facilities.

Across the years members of Congress with responsibility for the Smithsonian and those of us responsible for its management have created a partnership that, like the Institution we serve, is vigorous as well as venerable. I can think of no other relationship that has so well stood the tests of time, of public service, or of a founder's vision, and am grateful, indeed, for the opportunity of working with you for such a noble purpose.

SMITHSONIAN INSTITUTION
FY 1988 Budget Request

ACCOUNT, Bureau	Item	Dollars
SALARIES AND EXPENSES:		
FY 1987 Appropriation		183,920
Supplemental Requirement		5,880
Uncontrollable Increases		9,813
PROGRAMMATIC INCREASES:		
Research		
Astrophysical Observatory	Instrumentation for Submillimeter-wave astronomy	252
Astrophysical Observatory	Conversion of the Multiple Mirror Telescope	525
Tropical Research Institute	Tupper Laboratory and Conference Center staffing	567
Tropical Research Institute	Staffing, furnishings for new facilities	144
Tropical Research Institute	Molecular evolutionary studies	800
Environ. Research Center	Redirection of funds for biological activities	(1,600)
National Zoological Park	Support for current programs	382
National Zoological Park	Genetic management of rare and endangered species	250
S.I. Libraries	Completion of retrospective conversion	(200)
S.I. Libraries	Redirection of funds to accelerate cataloguing materials	200
S.I. Libraries	Support for branch library at Museum of African Art	32
Museums		
Museum of Natural History	Arctic archeology, anthropology and biology	200
Museum of Natural History	Collections management	160
Museum of Natural History	Computer hardware maintenance and replacement	47
Museum of Natural History	Columbus Quincentenary activities	48
Museum of Natural History	Molecular systematics laboratory	450
Air and Space Museum	Columbus Quincentenary world atlas	24
Museum of American History	Collections inventory support	93
Museum of American History	Columbus Quincentenary activities	58
Museum of American History	Redirection of Constitution Bicentennial funding	(450)
Museum of American History	Exhibition reinstallation program	227
Museum of American History	Center for the study of American history	76
Museum of American History	Master plan implementation	147
Museum of American History	Redirection of Duke Ellington funding	(200)
Natl. Portrait Gallery	Conservator	25
Natl. Portrait Gallery	Columbus Quincentenary activities	9
Natl. Portrait Gallery	Constitution Bicentennial program	111
Hirshhorn Museum	Columbus Quincentenary exhibition	23
Freer Gallery of Art	Collections storage equipment	100
Sackler Gallery	Redirection of Inaugural exhibition funding	(310)
Sackler Gallery	Enhancement of research capabilities	66
Sackler Gallery	Publications and public information programs	88
Sackler Gallery	Exhibition support	25

/1 Includes FY 1987 requirement for legislated pay raises, \$3,047,000; increased costs associated with the new Federal Employee Retirement System, \$1,971,000; and the restoration of the \$862,000 transferred to the Restoration and Renovation of Buildings account in the FY 1987 appropriation process for construction activities transferred to SERC-Edgewater.

ACCOUNT, Bureau	Item	Dollars
Museums (Con't.)		
Museum of African Art	Annualization of FY 1987 approved positions (Quad)	96
Museum of African Art	Assistant for Central African art	25
Museum of African Art	Automated systems development	40
Museum of African Art	Funds for shipping major loan exhibitions	69
Anacostia Neighborhood Museum	Termination of Carver Theater lease	(35)
Anacostia Neighborhood Museum	Research and exhibition enhancement	35
Office of Exhibits Central	Exhibitions and program support	31
Office of Exhibits Central	Annualization of FY 1987 approved position (Quad)	10
Traveling Exhibition Service	Support for Quadrangle-related activities	48
Traveling Exhibition Service	Columbus Quincentenary activities	90
Public Service		
Office of Public Affairs	Redirection of one-time publicity campaign costs	(21)
S.I. Press	Redirection of one-time Columbus Quincentenary costs	(4)
Directorate of Interntl. Activities		
	Columbus Quincentenary activities	47
	Exhibition planning	110
	Tropical biological workshop development	30
	International Center programs	70
Special Programs		
Office of Folklife Programs	Columbus Quincentenary activities	39
Office of Fellowships & Grants	Molecular biology research	100
Office of Symposia & Seminars	Redirection of Constitution Bicentennial funding	(100)
Office of Elem. & Second. Ed.	Redirection of Constitution Bicentennial funding	(11)
Natl. Science Resources Ctr.	Support for program activities	125
Administration		
Director, Facilities Services	Support for long-range facilities requirements	131
Ofc. of Personnel Admin.	Staff support due to implementation of new systems	56
Accounting and Financial Svcs.	Computer costs	150
Accounting and Financial Svcs.	Accounting Service Unit for Quadrangle	15
Procurement & Property Mgmt.	Support costs	108
Office of Safety Programs	Administrative officer	37
Office of Safety Programs	Hazardous waste program	112
Office of Safety Programs	Asbestos abatement program	132
Office of Safety Programs	Fire protection engineer	42
Office of Safety Programs	Hazard communication program	60
Office of Safety Programs	Computer equipment	71

ACCOUNT, Bureau	Item	Dollars
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Facilities Services		
Ofc of Design & Construction	Automated management and production scheduling system	75
Office of Protection Services	Annualization of positions approved in FY87 for Quad	207
Office of Protection Services	Guard positions for Quadrangle	165
Office of Protection Services	Redirection of funds: elimination of summer hours	(310)
Office of Protection Services	Redirection of funds: completion of Proprietary Alarm System	(356)
Office of Protection Services	Hire guard positions authorized by Congress	666
Office of Plant Services	Annualization of positions approved in FY87 for Quad	54
Office of Plant Services	Adequate base support	540
Office of Horticulture	Gardener and program support	40
Quadrangle Facility Mgmt	Annualization of positions approved in FY87	91
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SUBTOTAL, Salaries and Expenses		204,862
CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK:		
	Olmsted Walk - Phase III	2,600
	Renovation, repair, and improvements at Rock Creek	1,800
	Renovation, repair, and improvements at Front Royal	750
		<hr/>
SUBTOTAL		5,150
RESTORATION AND RENOVATION OF BUILDINGS:		
	General repairs and improvements	655
	Facade, roof and terrace repairs	1,980
	Fire detection and suppression systems	2,385
	Access for disabled, safety and security	950
	Utility systems repairs and improvements	5,560
	Other projects	2,724
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SUBTOTAL		14,254
CONSTRUCTION:	Whipple base camp	4,470
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TOTAL, SMITHSONIAN INSTITUTION		228,736
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BIOGRAPHY OF NANCY D. SUTTENFIELD

Nancy D. Sutenfield was appointed as Director of the Office of Programming and Budget at the Smithsonian Institution in July, 1986. In this capacity, Ms. Sutenfield has responsibility for designing, implementing and assessing both planning and budgeting policies and procedures for the Institution and for coordinating the formulation and execution of the budgets for both appropriated and nonappropriated funds.

For 13 years prior to joining the Smithsonian, Ms. Sutenfield held various positions in Virginia state government in the area of public finance. From 1983 to 1986, while serving with the Virginia Department of Planning and Budget, she was responsible for the development of the Executive budget for all of the Commonwealth's education programs, including the State's 16 senior institutions of higher education and its system of 23 community colleges, two teaching hospitals, 140 elementary and secondary school systems and two fine arts and science museums. From 1981 to 1983 she served as a budget analyst for various education programs.

From 1973 to 1981, Ms. Sutenfield held various economic research positions with the Virginia Department of Taxation. Ultimately, she had responsibility for directing the preparation of the Commonwealth's official revenue projections, conducting economic analysis studies, evaluating alternative tax policies for use by the Governor and estimating the fiscal impact of proposed tax legislation. While serving in this capacity, she drafted a tax reform proposal to more equitably differentiate between various forms of retirement income which was subsequently enacted into law and which has remained in effect for the past 10 years.

Shortly before resigning her last position with Virginia state government, Ms. Sutenfield was selected by Governor Gerald Baliles for honors as the "Top State Manager" in agencies responsible to the Secretary of Finance. Ms. Sutenfield holds a Master of Arts degree in economics from Virginia Commonwealth University (1978) and a Bachelor of Science degree in mathematics from Indiana University of Pennsylvania (1971). She has also attended the Federal Executive Institute program in executive leadership and management.

May 7, 1986

Richard L. Siegle

Richard L. Siegle was appointed on March 26, 1986, as principal advisor to the Assistant Secretary for Administration, the Under Secretary, and the Secretary on all aspects of facilities development and their support. As Director of Facilities Services, Mr. Siegle also oversees the programs and activities of the offices of Design and Construction, Plant Services, Protection Services, Safety Programs, and Keeper of the Castle.

Mr. Siegle, a Registered Professional Engineer in the states of Washington and Massachusetts, received a bachelor's degree from the University of Illinois (1956) and a master's degree from Stanford University (1970) in civil engineering. He held a succession of progressively responsible positions in the United States Navy Civil Engineer Corps, with assignments in seven states and in eight foreign countries in the Pacific and Far East. In 1978, Mr. Siegle became Director of Design and Construction for the State of Washington. He held this position until 1983, when he was promoted to Deputy Director for State Facilities, responsible for planning, designing, construction, maintaining and operating state-owned buildings including the Capitol, Legislative, Supreme Court, Governor's Residence and State Museum.

Mr. Siegle has served as officer or member of several professional organizations, including the American Society of Civil Engineers, the American Public Works Association, the Association of Physical Plant Administrators, and the National Society of Professional Engineers. The latter organization awarded Mr. Siegle the Order of the Engineer.

Mr. YATES. We are honored today to have our good friend and distinguished colleague, Mr. Boland, who is also a regent of the Smithsonian Institution.

Is there anything that you want to say before we start the hearing?

Mr. BOLAND. No, I think the Institution speaks for itself. You would not have to have witnesses.

Mr. YATES. It speaks very loudly.

All right, do you want to have your statement first or do you want the movie first? How do you want to proceed?

Mr. ADAMS. I would cheerfully accede to Mr. Boland's suggestion that we have popcorn and the movie first.

Mr. YATES. Popcorn and movie. You made popcorn?

Mr. BOLAND. Can we sell some?

BABY FERRETS

Mr. YATES. My staff asks if we can do the baby ferrets first? We are usually shown things.

Mr. ROBINSON. We are bringing these along to show you something rather remarkable, sir. These are the first ferrets ever produced by artificial insemination. Their importance is to the endangered species program, particularly to saving the black-footed ferret in Wyoming. You know there are only 18 of those left and they are in captivity and so far they have not bred naturally. We are hoping that the technique that we developed with these polecats can be applied to the black-footed ferret. This one is almost black-footed, as you can see.

Mr. YATES. Will they become black-footed ferrets?

Mr. ROBINSON. No, sir. There is a real technical problem in artificial insemination with this family because they have induced ovulation, and that means that the female only releases the egg during the actual mating. This makes it much more difficult to do artificial insemination with those kinds of animals. So it is a real tribute to our veterinary staff who devised the technique and made it work, as you can see from these charming beasts.

Mr. YATES. Congratulations. Thank you for bringing them in.

Mr. ROBINSON. We will take them back home where it is warm.

CALIFORNIA CONDOR

Mr. YATES. Are you also working on the condor?

Mr. ROBINSON. No, but I anticipated your question on that.

Mr. YATES. Be prepared. You must be a Boy Scout.

Would you like to respond to the condor now?

Mr. ROBINSON. Yes. There is only one left in the wild, as you know, and they are attempting to get that into captivity to be put into the zoo breeding program. There is no news as to how the breeding program is going.

Mr. YATES. Just one left.

Mr. ROBINSON. In the wild.

Mr. YATES. How many in captivity?

Mr. ROBINSON. I am not sure about that. Around 25.

Mr. YATES. What do they do when they have an adequate number of these? Will they free them to the wild?

Mr. ROBINSON. That is the plan, but so far there is no guarantee that the environmental conditions that they need to survive will be available. The advantage of taking them into captivity is that when they lay one egg in captivity, you remove it and put it in an incubator, and the female will lay another one. So, you get more eggs from a female in captivity than you would in the wild. She incubates the first laid egg. When you have them in the zoo, you can remove the egg and induce the female to lay another one, so you double your chances of having more than one. The zoo is doing quite well.

Mr. YATES. Would you do better than the zoo, do you think?

Mr. ROBINSON. For the record, sir, they are doing very well indeed.

Mr. YATES. Off the record.

[Discussion off the record.]

Mr. YATES. Do you have any ideas as to whether there are other places that might be better for that purpose than the particular zoo they are in?

Mr. ROBINSON. No, I think they are in very good hands.

Mr. YATES. That answers the question.

Now, after the ferrets, may we have the film? Oh, this is going to be out in the wild blue yonder, is it not?

Mr. SHAPIRO. Due to the media fascination with the term, everybody has heard of a black hole. What are black holes, and how do we know they really exist?

Mr. YATES. This is not the one from Calcutta?

Mr. SHAPIRO. No, no, this is different.

COMPUTER REQUIREMENT AT SAO

Mr. YATES. Before you go into that explanation, tell me, did Mr. Adams give you your computers?

Mr. SHAPIRO. Well, actually, you were very kind and added the funds to our budget, but we lost them in the House-Senate Conference.

Mr. YATES. How did that happen? I thought we protected you.

Mr. SHAPIRO. You tried.

Mr. YATES. Oh, my, that is sad. Well, we will protect you this year for sure.

Have you been hurt terribly as a result of not getting them last year?

Mr. SHAPIRO. Let me just say the pressure on our computer facility is overwhelming and causes great unhappiness among the scientists.

Mr. YATES. What difference does that make in your research?

Mr. SHAPIRO. They are unhappy because their research is slowed down because they cannot get the computer time they need.

Mr. YATES. We will try to protect you this year. We will try again.

BLACK HOLE

Now, into the black hole; the wild blue yonder and the black hole.

Mr. SHAPIRO. What is a black hole and how do we know it exists?

The first question is actually easier to answer than the second, but the reason I am standing up here and talking about it is because of the second.

This year, this past year, a Smithsonian scientist, Jeff McClintock, with the aid of an MIT colleague uncovered the best evidence and, so far, the only unassailable evidence, or unassailed evidence, I should say, that a black hole actually exists in space.

Now, the basic reason a black hole is thought theoretically to possibly exist is because of the force of gravitation. Everybody knows about gravity. The point that Newton discovered is that gravity is proportional to the mass of every object; that is, we have two objects and the force of gravity pulls them together and also the force is stronger the closer the masses get together. When they get very close, the force is extremely great.

So, if you think for a minute, you would think, well, why does not everything collapse? Why are we standing here on the earth? Why does gravity not pull everything together until it disappears, and we along with it?

The answer is that the earth is, by astronomical standards, a puny body, that is small, and the forces that give materials their strength, like this chair, are electrical forces that resist gravity and allow it to maintain its shape, the same with the earth. So the earth does not collapse. It can withstand gravity.

Now we come to a star. A star is just a big ball of hot gas. How come a star just does not collapse? The key there is that the gas is hot, and hot gas exerts pressure.

We all know if we closed a tin can with air inside and put it on the stove and heated it up, the force of the pressure exerted by the gas would blow the can apart. This same force in the star keeps the star from collapsing under the influence of gravity.

Well, what keeps the star hot? There is a giant fire in the middle, really nuclear burning—what happens in a hydrogen bomb, in particular. The fuel inside the star can last for literally billions of years and keep the star hot, but, eventually, even that fuel gives out and then the star cools and it can no longer resist the force of gravity and, if the star is big enough and the force of gravity is strong enough, then all forces, including nuclear forces, cannot resist it and the star collapses and disappears from view because it becomes so dense and so small that not even light can escape.

Well, if not even light can escape, how do we know it is there? How can we tell it is there? It still has its mass and, hence, it still has its gravitational force. And this gravitational force can be seen if one is lucky enough to find, say, another star which is visible moving around in a circle with nothing in the center. And this is exactly what happened in this case. A Smithsonian scientist looking at the heavens in X-Rays noted a star that looked very peculiar in X-Rays that never would have been noticed without these observations. These X-Ray observations were followed up by other Smithsonian scientists using optical telescopes, including the MMT, and discovered that there was an optically visible star moving around in a circle every seven and a half hours or so at about a million miles an hour. And from these figures, one can infer that there must be something in the middle that has to be sufficiently

massive that it could only be a black hole. And that is how we got the evidence of the existence of a black hole.

Mr. YATES. Sufficiently massive?

Mr. SHAPIRO. To cause this other star that is visible to move around it in a period of only seven and a half hours.

Mr. YATES. Is a black hole an object or a vacuum?

Mr. SHAPIRO. Well, it is an object.

Mr. YATES. Why do you call it a hole?

Mr. SHAPIRO. That was a term invented by John Wheeler, now at the University of Texas, as a catchy term. Hole, in the sense that mass falls in towards a point.

Mr. BOLAND. What is the ingredient of the hole?

Mr. SHAPIRO. The basic stuff the star was made of in the first place. Just a mass, anything. It just gets sucked in.

Now, you might naturally ask: What good is a black hole? Great, so you have discovered a black hole. Well, the answer there is a black hole is the most impressive source of energy known to exist in the universe. You may be aware of hydroelectric power on earth. We use the force of gravity, basically, to get energy from the water falling downhill. With a black hole, material fed to a black hole, the efficiency of conversion into energy and the amount can be several billion times as great. So, it could be the most enormous source of energy conceivable.

Well, are we going to do something practical with this today?

Mr. YATES. How are you going to harness it?

Mr. SHAPIRO. That is the point, can we tame a black hole? Certainly not today and certainly not tomorrow, but I know of no physical reason why we could not eventually learn how to tame a black hole. And who knows how long it might be before we can tap this enormous source of energy.

Mr. YATES. What do you mean by taming it? How are you going to get out there in the first place?

Mr. SHAPIRO. Well, how can you create a black hole here on earth? We would not be able to use the one many light years away, but if we could create one here on earth and tame it and feed matter into it, we would get enormous energy out of it.

Mr. YATES. Does the Super Collider contribute to that?

Mr. SHAPIRO. No, not really.

Mr. YATES. I thought that was going to study the makeup of matter.

Mr. SHAPIRO. That is going to study the makeup of matter at highest energies.

Mr. YATES. That is right.

Mr. SHAPIRO. But that is to understand the fundamental properties of constituents of matter. And we are talking about a black hole, a device to convert matter into energy efficiently.

Anyway, now for the film. The film is really a metaphor. It is the opening round, if you will, of an educational film we are in the midst of producing.

SEARCHING FOR EXTRATERRESTRIAL INTELLIGENCE

Mr. YATES. Before you tee off on the film, is it your shop or some other place that is trying to find out whether somebody else is living out there in space?

Mr. SHAPIRO. Well, there are a lot of people interested and searching.

Mr. YATES. I saw someone in a documentary who was glued to his dials and to his earphones sending pulses and signals out into space, trying to find somebody answering him.

Mr. SHAPIRO. Nobody is sending; we are all listening. Not all of us, but there are a number of groups around the world listening.

One of these groups, and it may be the one you saw, is headed by Paul Horowitz at Harvard, who is using a telescope which is half-owned by Harvard and half-owned by the Smithsonian.

Mr. YATES. Yes.

Mr. SHAPIRO. It is a 20-year old radio telescope, and he has devised some very clever electronics to make it an effective tool for searching for signs of extraterrestrial intelligence.

Mr. YATES. Now, does the fact it is 20 years old bear on the question as to whether it is powerful enough?

Mr. SHAPIRO. Well, basically, it is not a frontline instrument to do it. It is a radio telescope, by the way. It is not of the sort that can now do forefront astronomical research. But through his clever design of electronics, he can use it to search for signs of extraterrestrial intelligence from the nearby stars.

Mr. YATES. This has no relationship to your mirrors out in Arizona and to Dr. Challinor's request for a bigger mirror.

Mr. SHAPIRO. No.

Mr. BOLAND. Are some of the telescopes we are developing to be used in the identical fashion as the Smithsonian and Harvard-owned?

Mr. SHAPIRO. Some telescopes are planned for just that use. For example, some part of the time at Arecibo, a thousand foot diameter dish in Puerto Rico, will be used in this search. There is also a dish at the tracking station at Goldstone, California that will be used part time for this search as well.

You might ask how many telescopes do you need to do this search. One is searching in many dimensions.

COMPUTER ASSISTANCE

Mr. BOLAND. You can certainly say you never have enough.

Mr. YATES. That is what he says, you never have enough. Will the computers bear on this at all, your lost computers?

Mr. SHAPIRO. The computers are used to process the data. The instrumentation that we are now able to develop, for example, takes in data at an enormous rate. We have sophisticated analysis techniques that require an enormous amount of computer time to get all of the scientific information from the data. For example, the search for extraterrestrial intelligence out at the Oak Ridge Observatory in Harvard, Massachusetts requires a lot of computer power to analyze the data to see whether there are any signs of extraterrestrial intelligence.

Mr. YATES. Are there, in the Federal Government, computers of the kind that you are seeking, or better than you are seeking, to which your data may be sent for analysis?

Mr. SHAPIRO. It is not quite that simple. We do have access now to the NSF Super Computer Network, and that access is used for certain kinds of computations, where you do a lot of things in parallel and you do it in a batch mode. You give the computer a lot of data and you sit back and wait for the answer. But a lot of the analyses require interaction with the computer. You are not sure what problems there are with the data, and you have to keep interacting with the computer. For that purpose, having computers on-site is virtually indispensable.

Mr. YATES. Are the computers that you have on-site as perfect for your purpose as the ones from the National Science Foundation?

Mr. SHAPIRO. The computers that we want on-site are better for our purposes than these giant super computers. It would be a waste, you know, like having an elephant kill a gnat to use the super computer.

Mr. YATES. Is the delay in getting the computers helpful in the fact that advances are being made in computers, so you will have better computers available?

Mr. SHAPIRO. That is true, but if you take that argument to its logical conclusion, you would never do anything.

Mr. BOLAND. Let me ask you, the super computer at NSF, is that a network super computer?

Mr. SHAPIRO. That is correct.

Mr. BOLAND. It is expensive, an expensive proposition. Let me ask whether or not, if the suggestion was made, why do you not use that? I take it is not possible for you to use that; it would not be convenient?

Mr. SHAPIRO. There are certain kinds of computations for which they are admirably suited. It would be grossly inefficient, and no time would be allocated for these other analyses.

INTERNATIONAL GEOPHYSICAL YEAR

Mr. YATES. One last question, but before that, I want to acknowledge the presence of Mr. Mineta, who is not only our good friend and very distinguished colleague in the House, but also a regent of the Smithsonian.

Mr. Boland and I many years ago were privileged to sit on the Independent Offices Appropriations Subcommittee at the time when we funded the International Geophysical Year. Are we ready for another one of those?

Mr. SHAPIRO. Well, there are plans to have a similar one in 1992, as far as I am aware. It is gathering momentum all over the world.

Mr. YATES. Who has the lead on that? Is this something that the Smithsonian can take the lead on?

Mr. SHAPIRO. Well, how shall I put it? In principle, it could; but this is a vast undertaking.

Mr. YATES. That is why I asked the question.

Mr. BOLAND. You can give the lead to somebody else.

Mr. YATES. Well, I do not know. Is the Smithsonian geared for that? Who is taking it? Should it be done, in the first place? One, if it should be done; apparently the answer to that is yes. Somebody has answered that yes, it is taking place.

Mr. SHAPIRO. No, I did not say it was taking place. Planning is moving along.

Mr. YATES. For 1992?

Mr. SHAPIRO. Yes.

Mr. YATES. Is the Smithsonian participating in that?

Mr. ADAMS. If it takes place, we certainly will.

Mr. YATES. You will. All right. But who is moving it?

Mr. SHAPIRO. How shall I put it? There are a lot of people in a lot of different countries coordinating through appropriate international scientific bodies to organize this. It is not that there is a black hole spewing out funds for everyone.

Mr. YATES. Some have described the U.S. Treasury that way.

Mr. SHAPIRO. It is a question of organizing all of the research activities towards, and similar to, the International Geophysical Year in 1958.

Mr. YATES. Why should the Smithsonian not take a lead in that?

Mr. ADAMS. We certainly will be involved.

Mr. YATES. That does not answer my question. Why do you not take a lead in that?

Mr. ANDERSON. There are agencies in the Executive Branch, Mr. Chairman, who are already gearing themselves up for a major role, the National Aeronautics and Space Administration among them in the forefront, as you would imagine.

Mr. YATES. Were you aware of that?

Mr. BOLAND. No.

Mr. YATES. He is Chairman of the Appropriations Subcommittee which funds NASA.

Mr. ANDERSON. Falling under the general banner of the "International Year of Space 1992," there have been interagency task forces within the Executive Branch meeting actively to see what kinds of activity might be pulled together under that general banner without, as I understand, to date, any specific requests for funding. It is still at the planning stage. And the Institution has had a representative sitting in and observing those sessions.

Mr. YATES. The question is whether an "International Year of Space" will cover the same universe that the International Geophysical Year covered. As I remember, that was from the highest heavens to the lowest depths in many places throughout the world. If you are in space, what happens to the depth?

Mr. SHAPIRO. You look down.

Mr. YATES. How far do you look. From upper space?

Mr. SHAPIRO. To the surface of the earth and slightly below, depending on your equipment.

Mr. YATES. Well, do you cover the same area as you did in the International Geophysical Year?

Mr. SHAPIRO. Yes.

Mr. YATES. All right, at long last, on with the picture. I am sorry, did Mr. Mineta go?

Mr. ANDERSON. He said he had to leave.

THE FILM

Mr. SHAPIRO. This is a one-minute version which, as I said, is more a metaphor to go along with a discussion of black holes.

This is just showing you that things can exist on earth. The film is out of focus.

Mr. YATES. Would your computers have helped?

Mr. SHAPIRO. It is not easy to make a film like this. This is a view of earth from LANDSAT. This is a view of earth from space, a view of the earth from the moon, a view of Saturn's rings.

Mr. YATES. Should you not be turning the lens on your projector to try and make it sharper.

Mr. SHAPIRO. This is a star, schematically; now looking inside the star, we see the nuclear fire going on. You see it is bright, hot; and then, after awhile, schematically it gets cooler as the fuel gets utilized, and gradually the star begins to cool. If you have patience for another five minutes, you see it getting even cooler. Did I say five minutes? I meant five seconds. Now it is getting really cool and we are taking a look at the outside. The outside gets cooler and cooler and the star starts to collapse and disappears from view.

How can we tell it is there?

That is the next part of the film, where we see another star moving around something we cannot see. But the fact it is moving in a circle proves, beyond any scientist's doubt, that there is something in the middle there around which this star is going. And that, of course, is how we determine the existence of a black hole—that we see a star moving around one. And the only way we are able to pick this star out from the 100 billion stars that are in our galaxy is because the X-Ray observations, with an entirely different technique, pick this one out as the brightest object in the heavens. It is perfectly ordinary optically. You would never even notice it. That shows the power of bringing to bear different techniques.

Mr. BOLAND. How many black holes are there up there?

Mr. SHAPIRO. Who knows? Hundreds, thousands; we do not really know. This is the first case where the evidence has not yet been assessed.

Mr. YATES. Have you measured the rotation circumference of the star that is moving around the black hole?

Mr. SHAPIRO. That is right, we measure the radius of that orbit and we measure the period of that orbit. And from that and the law developed by Kepler, we can tell the mass of the black hole. We know, because that object is so massive, it has to be a black hole.

Mr. YATES. I think I will ask that question of my grandson. He is 12 years old. He just won a gold star in astronomy at the Planetarium.

Mr. SHAPIRO. At the risk of outwearing my welcome, I just want to—

Mr. YATES. You are very welcome.

EDUCATION PROJECT AT SAO

Mr. SHAPIRO. I will show you a few things we are doing in this Education Project. We have a very ambitious program to teach science in pre-college—high schools and elementary schools—using as-

tronomy as the tool, because most kids are fascinated by astronomy. We believe in teaching fundamental principles and coming back to them in a different context so that children really understand the principles and do not get overwhelmed by a lot of unrelated concepts.

In teaching these principles, we have developed some things the children themselves can make and that are very inexpensive, so that every school system can afford it.

Here, for example, we have for two cents what we call a camera obscura; just the remains of a paper towel wrap, a little piece of graph paper and aluminum foil, which you put a pin hole in. You can look through this and see the sun and measure its diameter on this graph paper. Students actually can understand the relationships between brightness and distance and angular size. I will not get into the whole lesson. But the point is, the kids can build this in five minutes and it costs less than two cents and they can really learn something.

We have here, at an elevated cost of 50 cents, a telescope the power of Galileo's telescope that children can put together in about half an hour or less. It is made of just a little piece of black paper, Scotch tape, a couple of plastic caps. They are plastic lenses. I think we could bring the price down to about 20 cents. A telescope with the power of Galileo's. In fact, we have more power in it because we have a little measuring device in here and the kids can actually measure the distance of Jupiter——

Mr. YATES. I will change with you. I will give you a coughdrop for taking a look at that.

[Laughter.]

Mr. SHAPIRO. This is an astronomical telescope, so when you look through that, things will be upside down.

Mr. YATES. It is interesting. It does have pretty good power to it.

Mr. SHAPIRO. Yes.

Mr. YATES. Does that complete your statement?

Mr. SHAPIRO. Yes.

SECRETARY'S STATEMENT

Mr. YATES. Thank you very much for a fascinating exposition.

Mr. Secretary, you have a statement which may go into the record. There are other things you want to tell us, I am sure, before we go into the formal part of the meeting of asking you questions.

We had a meeting, an informal meeting, and you told us at that time of some of the goals of Smithsonian, some of the costs that you are anticipating, some of the problems you have in keeping your Institution together.

Is this the appropriate time to discuss that?

Mr. ADAMS. I think perhaps so. I think many of those issues will arise during the course of the morning severally rather than trying to bring them all together, Mr. Chairman.

We perhaps should conclude the previous presentation, however, by assuring the Committee that the Smithsonian will make every reasonable effort not to introduce a black hole on earth until we know how to stop it.

I guess I would like to begin a very brief oral statement.

Mr. YATES. Okay.

Mr. ADAMS. Referring back to something that has been called to my attention that the first Secretary of the Smithsonian wrote in the Annual Report for 1849. That was an earlier and more innocent time. He wrote, at that time,

The appropriation for the upkeep of a large museum would be objectionable since it would annually bring the Institution before Congress as a supplicant for Government patronage, and ultimately subject it to political influence and control.

The point I would like to make is, with another almost 140 years of experience to allow us to see this with the wisdom of hindsight, I do not think it turns out that his fears were justified. And it seems to me that, certainly, in the present climate, which is difficult in many ways, we have found you, as the Chairman of this Subcommittee, and the members of the Subcommittee to be personally sensitive to the range of problems that an Institution like this faces, which are different than those that occur in most of the Federal Government, in that we really need to be concerned with husbanding collections and husbanding the human capital that is involved in maintaining the programs of the Institution, with having a long-term view in which our programs unfold over time. And, given the urgency of the budgetary problems, and the perennially short time perspective of the system in which there are annual appropriations, one might have expected this to be more difficult to do than, in fact, it is.

We have found, in fact, that the system is one that, through informal interactions as well as certainly this Committee in its regular meetings, operates pretty darned well, I would say, to provide you with the degree of oversight that Congress should have, and to provide us with an understanding approach to our long-term needs.

I think the evidence for that is provided in the current year by the fact that one of our great projects is coming on line. The Quadrangle will open in September. This is a project of extraordinary importance. It contains a variety of functions of the Institution in full keeping with its mission. And it has come together as a result of long-term planning and close cooperation between the private sector and the Federal Government. And the fact that this kind of thing can come off indicates a degree of sensitivity that we are grateful for and proud of. I think that is the essential point that I would like to make.

HVAC REPLACEMENT AT NATURAL HISTORY

We do have long-term problems. In this informal session to which you referred a moment ago, we did have an opportunity to discuss the forbidding outlook for long-term maintenance, for example, going well beyond the five-year perspective, which we have been providing; the forbidding outlook for increasing costs and the problems of budgeting to meet those increasing costs. The HVAC System in the Natural History Museum, Mr. Boland, for example, will need to be replaced, and it is a job which is probably on the order of a \$100 million job.

Mr. BOLAND. I am struck by the size of that figure.

Mr. ADAMS. Well, it is a huge installation, as you know. It has a variety of very complex functions going on within it. It has laboratories that need special ventilation and so on. It has serious hazards to health that are involved in the chemicals that are used there. So it is not a simple thing to do at all.

Mr. BOLAND. You will probably have to tear it down and build a new one.

COMPREHENSIVE MAINTENANCE REQUIREMENTS

Mr. ADAMS. That \$100 million would not build us a new one is the real problem. But, in any case, we do face such problems. And we do face another set of problems that were mentioned in this informal session, and they are an outgrowth of what Dr. Shapiro was just mentioning. You cannot perform at the cutting edge of research in fields like astronomy and astrophysics and many other fields as well, without preparing for what you will be doing ten years hence—and preparing for it in terms of construction of facilities and testing of instrumentation and many other functions that need to go on long before the major budgetary items appear. So we do have some special requirements that need to be addressed, and I think this system has proved to be more adaptable to taking those requirements into consideration then, frankly, I would have expected before I came to Washington.

Mr. YATES. The question is, the problem is a very huge and difficult one. The figures you have given us, at least the ones I have seen, are just the maintenance, and just for the short-term maintenance which is standing still; standing still and trying to be adequate in preserving yourself. You have such a huge figure. It is like the Red Queen statement; you have to run in order to stand still. And your job is not only to stand still, although I think budgetary restraints are really closing in on you in some measure, your job is the admonition and command that was given to you by Mr. Smithsonian in his will, and that is to go out into the world with your knowledge, diffuse it, and go on. So you do need a base that will not crumble under you as you carry on your challenge. And, as far as this Member of the Committee is concerned, I think you have got to keep your base, which is all your institutions, intact and sound in order to be able to do that.

How broad you make Mr. Smithsonian's challenge is as wide as Mr. Shapiro's universe, I should say Dr. Shapiro.

Mr. ADAMS. I would say, Mr. Chairman, that the only way we can proceed, given this contradictory set of tensions, so to speak, which we are certainly suffering from, is, on the one hand, to make as apparent as we can through projections like we have given you, our own best estimates of what the needs are and what the problems are, looking at them over the long-term.

Then, year by year, we need to come back to you and to say, given the realities of the budget process, given what we have to work with, we would propose to move this far on questions of maintenance, this far on questions of advancing knowledge or diffusing knowledge, or whatever it may be. And that balance is going to have to be struck anew in light of budgetary realities. And I do not say that we are going to spend the kind of money that we have put

down there because it may not be available. We understand that. And the adjustment, the moving target, so to speak, is something that happily falls within the oversight of this Committee. We will have to return to that question again and again, I assume, and I do not know what more one can say.

Mr. YATES. I think you said it very well.

I think I will put into the record at this point your letter to me of March 10, with the various attachments that are described, Attachments 1 and 2. Attachment 1, as you state in your letter, "is a listing that describes in some detail the magnitude and types of essential maintenance and repair requirements that we have thus far identified in each of our buildings. We currently estimate the total cost of these projects to be \$216 million,"—not a small figure—"although we continue to identify other needed work as we conduct building inspections."

How much more is that figure likely to grow?

Mr. ADAMS. I think I would ask Mr. Siegle to take that.

Mr. YATES. Mr. Siegle, now that you have got an empire to take care of, how much larger is that likely to grow?

Mr. SIEGLE. Mr. Chairman, we have not been through all of the buildings with a detailed inspection team. We are doing that at the present time and we will address that in our budget for 1989, also for the staff to do that.

It is going to grow because we know there are things that have not been identified.

Mr. YATES. Give us an example of that.

Mr. SIEGLE. For the Castle Building, our oldest building, the backlog list contains an item "to conduct a thorough inspection of the building to determine structural problems." That building has had some differential settlement; it had vines growing on it for many years that got in between the joints of the stone. I anticipate we are going to have probably a million dollars or more of structural repairs to that building. That is now not in the backlog. But I know it is there, you can see it. There are cracks. But we do not know the magnitude of it. We are asking for some funds to hire a structural engineer to do a very detailed structural inspection of that building. It has not been done.

Mr. YATES. In other words, ivy-covered walls are nice.

Mr. SIEGLE. They look beautiful, but it is not the right thing to do for stone.

Mr. YATES. Attachment 2 is a one-page synopsis showing the additional amounts that we realistically could expect to manage and expend in FY 1988 with current staff to more adequately address this backlog of deferred maintenance. We have distinguished between otherwise routine maintenance and large scale major cyclical repair work by showing separate. Increments for Restoration and Renovation of Buildings and for the proposed new account Major Capital Renewal. We have also noted the levels of outyear funding which in our view will be necessary to make progress toward eliminating this backlog.

PROGRAMMATIC REQUIREMENTS

Then Attachment 3, and I must commend you for your presentation. I think it is a very good presentation, and the kind we hoped for when we had our meeting.

In Attachment 3, we have aggregated the general magnitude of our needs within broad descriptive categories in which either you have indicated specific interest or which otherwise seem to make sense. For example, we have aggregated all research-related needs from all bureaus and offices under the category of "Research." Similarly, we have aggregated all education and Quincentenary needs under Public Outreach. We have noted, where appropriate, current estimates of any additional sums that will be required in outyears to continue major programmatic efforts and to pursue our long term construction plans. These outyear projections are consistent with the draft *Prospectus* that we sent you several weeks ago.

And that is the letter and the enclosures, all of which may go into the record.

[The information follows:]



SMITHSONIAN INSTITUTION

*Washington, D.C. 20560
U.S.A.*

March 10, 1987

Honorable Sidney R. Yates
Chairman
Subcommittee on Interior
Committee on Appropriations
U. S. House of Representatives

Dear Mr. Chairman:

At our meeting with you and Mr. Regula last week, you requested that prior to our hearing we identify the full range of the facilities maintenance and repair requirements facing the Smithsonian in the years ahead. I am pleased to transmit this information for your review.

Attachment 1 is a listing that describes in some detail the magnitude and types of essential maintenance and repair requirements that we have thusfar identified in each of our buildings. We currently estimate the total cost of these projects to be \$216 million, although we continue to identify other needed work as we conduct building inspections.

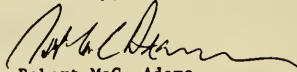
Attachment 2 is a one-page synopsis showing the additional amounts that we realistically could expect to manage and expend in FY 1988 with current staff to more adequately address this backlog of deferred maintenance. We have distinguished between otherwise routine maintenance and large scale major cyclical repair work by showing separate increments for "Restoration and Renovation of Buildings" and for the proposed new account "Major Capital Renewal." We have also noted the levels of outyear funding which in our view will be necessary to make progress toward eliminating this backlog.

You also indicated some interest in our programmatic and new facilities needs. In Attachment 3, we have aggregated the general magnitude of our needs within broad descriptive categories in which either you have indicated specific interest or which otherwise seem to make sense. For example, we have aggregated all research-related needs from all bureaus and offices under the category of "Research". Similarly, we have aggregated all education and Quincentenary needs under "Public Outreach". We have noted, where appropriate, current estimates of any additional sums that will be required in outyears to continue major programmatic efforts and to pursue our long term construction plans. These outyear projections are consistent with the draft Prospectus that we sent you several weeks ago.

-2-

We look forward to discussing the enclosed materials and our FY 1988 budget request at our hearing on Thursday.

Sincerely,



Robert McC. Adams

ATTACHMENT 1

SMITHSONIAN INSTITUTION
BACKLOG OF ESSENTIAL MAINTENANCE AND REPAIRS
ON SMITHSONIAN OWNED BUILDINGS

AS OF FEBRUARY 1, 1987

The attached list contains the unfunded backlog of identified work which is required to repair or preserve facilities, assure continued operation of building systems and equipment, or bring buildings into compliance with life safety and health code/standards. The current program of building inspection and subsequent engineering studies will result in annual refinement of work contained in the backlog and cost estimates for performing the work.

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

SUMMARY SHEET

(in thousands of dollars)

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telephone	TOTALS
National Museum of American History									
TOTALS:	1,925	0	0	3,845	7,540	870	390	0	14,570
National Museum of Natural History									
TOTALS:	770	8,050	0	2,800	101,475	0	60	0	115,135
Smithsonian Institution Building									
TOTALS:	2,930	150	0	750	120	0	0	0	3,950
Arts & Industries Building									
TOTALS:	2,400	100	0	0	20,400	0	0	0	23,100
American Art/Portrait Galleries									
TOTALS:	0	590	0	495	5,270	45	875	0	7,465
National Air & Space Museum									
TOTALS:	10,375	325	0	1,050	100	0	485	0	12,335
Renaitt Gallery									
TOTALS:	125	0	0	415	830	0	0	0	1,370
Freer Gallery of Art									
TOTALS:	325	0	0	100	200	125	0	0	750
Silver Hill Facility/Museum Support Center									
TOTALS:	0	0	0	845	100	165	0	0	1,110
Smithsonian Environmental Research Center									
TOTALS:	785	0	200	70	0	0	30	0	1,085
Hirshhorn Museum & Sculpture Garden									
TOTALS:	3,620	0	225	190	875	25	0	0	4,935
Amcostia Neighborhood Museum									
TOTALS:	0	0	0	135	0	0	0	0	135
Cooper-Hewitt Museum									
TOTALS:	505	120	0	215	750	90	10	0	1,690
Smithsonian Institution Tropical Research Institute									
TOTALS:	1,815	735	245	290	0	435	0	0	3,520
Smithsonian Astrophysical Observatory-Whipple Observatory									
TOTALS:	2,170	0	0	50	0	90	0	0	2,310
Miscellaneous									
TOTALS:	2,300	2,880	0	8,450	260	100	0	8,750	22,740
GRAND TOTALS:	30,445	12,920	670	19,900	139,920	1,945	1,850	8,750	216,400

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Loading Dock Ceiling	40	0	0	0	0	0	0	0
Loading Dock Vapor Barrier	55	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Planning/design fountain renovation	175	0	0	0	0	0	0	0
Terrace repair	1,425	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Fire Detection Master Plan Implementation	0	0	0	3,350	0	0	0	0
AB052 Halon System	0	0	0	30	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Modification for Disabled Access	0	0	0	265	0	0	0	0
Protective Barriers	210	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
HVAC Improvements/Relocation of Space Functions	0	0	0	0	7,300	0	0	0
Loading Dock & Paint Shop Ventilation Study & Implementation	0	0	0	0	240	0	0	0
Electrical Switchgear Replacement	0	0	0	0	0	800	0	0
Sluiceway System	0	0	0	0	0	70	0	0
Misc. Electrical, Lighting & Switching Mods.	0	0	0	0	0	0	15	0
Danger & Exhaust Fan Modifications	0	0	0	0	0	0	60	0
4th & 5th Floor Thermostats	0	0	0	0	0	0	35	0
Exhaust Air Heat Recovery	0	0	0	0	0	0	170	0
6. OTHER PROJECTS								
Shading & Screening	0	0	0	0	0	0	110	0
TOTALS:	1,925	0	0	3,845	7,540	870	390	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

31-NATIONAL MUSEUM OF NATURAL HISTORY-31

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telephone
1. GENERAL REPAIRS & IMPROVEMENTS								
Rotunda Column Cleaning	65	0	0	0	0	0	0	0
Inner Doors at Locking Dock	0	0	0	0	0	0	60	0
2. FACADE, ROOF & TERRACE REPAIRS								
Roof Repair	100	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Fire Protection Master Plan Implementation	0	0	0	2,800	0	0	0	0
4. ACCESS SAFETY & SECURITY								
North & South Entrance Approvements	300	0	0	0	0	0	0	0
New Interior Handrails	0	645	0	0	0	0	0	0
Hall 16 Disabled Access	0	125	0	0	0	0	0	0
Protective Barriers	305	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
HVAC Energy Conservation Improvements	0	0	0	0	91,885	0	0	0
Interior Corrective Measures	0	0	0	0	11,590	0	0	0
6. OTHER PROJECTS								
ARP Relocation	0	400	0	0	0	0	0	0
Relocation Costs (Master Plan)	0	6860	0	0	0	0	0	0
TOTALS:	770	8,030	0	2,800	103,475	0	60	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987
 32-SMITHSONIAN INSTITUTION BUILDING-32

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telephone
1. GENERAL REPAIRS & IMPROVEMENTS								
No Projects Identified	0	0	0	0	0	0	0	0
2. FACADE ROOF & REPAIRS								
Facade Restoration (masonry)	200	0	0	0	0	0	0	0
Window Replacement	2730	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Sensor Detection/Sprinklers/Fire Zones	0	0	0	750	0	0	0	0
4. ACCESS SAFETY & SECURITY								
No Projects Identified	0	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Utility Systems Study/Energy Audit/Implementation	0	0	0	0	65	0	0	0
Misc. HVAC Projects	0	0	0	0	33	0	0	0
6. OTHER PROJECTS								
Structural Inspection & Pre-planning Study	0	150	0	0	0	0	0	0
TOTALS:	2930	150	0	750	120	0	0	0

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33-ARTS & INDUSTRIES BUILDING-33

	Exterior	Interior	Plumbing	Fire/Life	HMAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
No Projects Identified	0	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Roof & Facade Renovation	2,500	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Smoke Detection/Sprinklers/Fire Zones	100	100	0	0	0	0	0	0
4. ACCESS SAFETY & SECURITY								
No Projects Identified	0	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
HMAC Renovation/Energy Conservation	0	0	0	0	12,500	0	0	0
Utility Tunnel Repair (including	0	0	0	0	7,900	0	0	0
6. OTHER PROJECTS								
No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	2,600	100	0	0	20,400	0	0	0

34-AMERICAN ART/PORTRAIT GALLERIES-34

363

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telcom
1. GENERAL REPAIRS & IMPROVEMENTS								
General Repairs & Attic Storage Space	0	230	0	0	0	0	0	0
Waterproofing & Detection	0	350	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Window Replacement	0	0	0	0	0	0	875	0
3. FIRE DETECTION & SUPPRESSION								
Fire Protection Improvements	0	0	0	675	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Building Accessibility/Implementation Study	0	0	0	20	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
HVAC System Renovation	0	0	0	0	5,200	0	0	0
Test & Balance Air & Water Systems	0	0	0	0	35	0	0	0
Replace GPOB Steam Station	0	0	0	0	35	0	0	0
Misc. Electrical Wiring	0	0	0	0	0	45	0	0
6. OTHER PROJECTS								
No Project Identified	0	0	0	0	0	0	0	0
TOTALS:	0	580	0	695	5,270	45	875	0

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35-NATIONAL AIR & SPACE MUSEUM-35

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Paint Structural Trusses	0	125	0	0	0	0	0	0
Replace Third Floor Ceiling	0	200	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Plaza Surface Replacement	3,820	0	0	0	0	0	0	0
Roof Repairs	900	0	0	0	0	0	0	0
Facade Repairs/Water Intrusion	800	0	0	0	0	0	0	0
Skylight Replacement	4,300	0	0	0	0	0	0	0
Skylight Interior Repair	250	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Fire Protection Master Plan Implementation	0	0	0	950	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Emergency & Handicapped Door Replacement	30	0	0	0	0	0	0	0
Replace Floor Grates at Entrance Doors	0	0	0	100	0	0	0	0
Protective Barriers	275	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Misc. HVAC Projects	0	0	0	0	100	0	0	0
Modification of Air Handling System	0	0	0	0	0	0	310	0
Replace Evaporator Tubes	0	0	0	0	0	0	100	0
Ramsey Room Special Air Handling Equipment	0	0	0	0	0	0	25	0
Chiller Modifications	0	0	0	0	0	0	50	0
6. OTHER PROJECTS								
No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	10,575	325	0	1,050	100	0	485	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

36-RENNICK GALLERY-36

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
No Projects Identified	0	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Roof Repairs	125	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Fire Protection Improvements	0	0	0	315	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Emergency Lighting	0	0	0	50	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Energy Study Implementation	0	0	0	0	800	0	0	0
Install Public Address System	0	0	0	50	0	0	0	0
Replacement of Cooling Tower	0	0	0	0	30	0	0	0
6. OTHER PROJECTS								
No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	125	0	0	415	830	0	0	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

37-FREER GALLERY OF ART-37

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS No Projects Identified	0	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS Facade Pointing & Repair	325	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION Fire Alarm Improvements - Gallery & Attic Levels	0	0	0	100	0	0	0	0
4. ACCESS SAFETY & SECURITY Security System	0	0	0	0	0	125	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS Modify Steam Heating System	0	0	0	0	200	0	0	0
6. OTHER PROJECTS No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	325	0	0	100	200	125	0	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987
3B-SILVER HILL FACILITY-3B -- 39-MUSEUM SUPPORT CENTER-39

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Road Repairs between Buildings 7 through 19	150	0	0	0	0	0	0	0
Restroom for Disabled, Building 22 (MSM)	0	0	0	25	0	0	0	0
Silver Hill Fence & Road Program	100	0	0	0	0	0	0	0
Repainting & Repair of Building 28 (NMAH)	40	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Exterior Maintenance, Building 10	30	0	0	0	0	0	0	0
Exterior Maintenance, All Buildings	250	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Building 15 & 16 Sprinkler System Expansion (NMAH)	0	0	0	50	0	0	0	0
Buildings 25, 26, 28 - Fire Protection System	0	0	0	350	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Safety Rails, Buildings 15, 16, 17, 18 & 19 (NMAH)	0	0	0	170	0	0	0	0
Building 10 Addition for Chemical Cleaning	0	0	0	200	0	0	0	0
Public Address System (MSC)	0	0	0	50	0	0	0	0
Road Maintenance (MSC)	40	0	0	0	0	0	0	0
Exterior Lighting Modifications	0	0	0	0	0	100	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Uninterrupted Power Source (MSC)	0	0	0	0	0	25	0	0
Buildings 7, 22, & 23 - Electrical Upgrade	0	0	0	0	0	40	0	0
Buildings 22 & 23 - HVAC Upgrade	0	0	0	0	100	0	0	0
6. OTHER PROJECTS								
No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	0	0	0	845	100	165	0	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

44-SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER-44

	Exterior	Interior	Plumbing	Fire/Safety	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Dock Structural Analysis & Repair	225	0	0	0	0	0	0	0
General Repairs	180	0	0	0	0	0	30	0
Road Repairs & Improvements	350	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
No Projects Identified	0	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Misc. Fire Protection (Field Lab., Admin. Bldg., Mail, Calif Barn)	0	0	0	20	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Restroom Modifications (Visitor's Center)	0	0	0	25	0	0	0	0
Access - Administration Building	0	0	0	25	0	0	0	0
Security Gate	30	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Sewage System	0	0	200	0	0	0	0	0
6. OTHER PROJECTS								
Storage Building	0	0	0	0	0	0	0	0
TOTALS:	785	0	200	70	0	0	30	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987
45-HIRSHORN MUSEUM & SCULPTURE GARDEN-45

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Parapet & Wall Ventilation	500	0	0	0	0	0	0	0
Court Sill (3rd & 4th Floor)	200	0	0	0	0	0	0	0
Balcony Glass & Gaskets	220	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Plaza Resurfacing and Landscape	2700	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Sprinkler System/Ground Floor	0	0	0	80	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Minor Safety/Security Projects	0	0	0	110	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Air Economizer Modifications	0	0	0	0	25	0	0	0
Constant Volume System Conversion	0	0	0	0	250	0	0	0
Install Natural Gas Boiler	0	0	0	0	120	0	0	0
Pass Danger Loop	0	0	0	0	35	0	0	0
Water-side Economizer System	0	0	125	0	0	0	0	0
Valves for Chilled Water Coils	0	0	65	0	0	0	0	0
Steam Reheat Coil Replacement	0	0	0	0	0	0	0	0
Motor Control Replacement	0	0	0	0	270	0	0	0
Cooling Tower Replacement	0	0	0	0	65	0	0	0
Various Reheat Coil Replacement	0	0	0	0	90	0	0	0
Misc. Pump Replacement	0	0	0	0	20	0	0	0
Interior Lighting Modifications	0	0	35	0	0	0	0	0
6. OTHER PROJECTS								
No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	3620	0	225	190	875	25	0	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

46-AMCOSTIA NEIGHBORHOOD MUSEUM-46

	Exterior	Interior	Plumbing	Fire/Life	HWC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS No Projects Identified	0	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS No Projects Identified	0	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION No Projects Identified	0	0	0	0	0	0	0	0
4. ACCESS SAFETY & SECURITY Install Elevator & Freight Lift	0	0	0	135	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS No Projects Identified	0	0	0	0	0	0	0	0
6. OTHER PROJECTS No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	0	0	0	135	0	0	0	0

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
General Repairs	120	0	0	0	0	0	0	0
Fence Restoration, Repair & Painting	50	0	0	0	0	0	0	0
Improvements to Elevator, Mansion	0	0	0	35	0	0	0	0
Miller House Elevator	0	0	0	180	0	0	0	0
New Vestibule - Employees Entrance	10	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Roof: Immediate Repairs & Replacement	325	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
No Projects Identified	0	0	0	0	0	0	0	0
4. ACCESS SAFETY & SECURITY								
No Projects Identified	0	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Energy Study Implementation	0	0	0	0	750	0	0	0
Various Energy Conservation Measures	0	0	0	0	0	0	10	0
Air Handling Demolition	0	0	0	0	0	10	0	0
New Feeder & Starter @ HMU & Chiller Plant	0	0	0	0	0	20	0	0
Replace Electrical System - Miller House	0	0	0	0	0	60	0	0
6. OTHER PROJECTS								
Demolition & Preparation for New Mech. Rm.	0	120	0	0	0	0	0	0
TOTALS:	505	120	0	215	750	90	10	0

BUDGET OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

SMITHSONIAN INSTITUTION TROPICAL RESEARCH INSTITUTE-50

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telephone
1. GENERAL REPAIRS & IMPROVEMENTS								
General Repairs	300	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
Painting of Structures	100	0	0	0	0	0	0	0
Roof Repairs at Various Sites	200	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Fire Protection-BCI	0	0	0	65	0	0	0	0
Fire Protection-Variou Sites	0	0	0	200	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Petroleum Storage Facility-BCI	0	0	0	25	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
Upgrading of Water & Sewage-BCI	0	0	75	0	0	0	0	0
Sewage Collection & Treatment Plant-Maous	0	0	120	0	0	0	0	0
Communication Structure - BCI	45	0	0	0	0	0	0	0
Emergency Generator & Building-BCI	0	0	0	0	0	140	0	0
Sewerage System Improvement-Maous	0	0	50	0	0	0	0	0
Emergency Generator & Building - Maous	0	0	0	0	0	175	0	0
Communications/Electrical - BCI	0	0	0	0	0	50	0	0
6. OTHER PROJECTS								
Dock Replacement-BCI	270	0	0	0	0	0	0	0
Dock - Gaebou	200	0	0	0	0	0	0	0
Boathouse Renovation - BCI	165	0	0	0	0	0	0	0
Miscellaneous Demolition - BCI	110	0	0	0	0	0	0	0
Administration Building Renovation - Tivoli	0	100	0	0	0	0	0	0
Aquarium Building Renovation - Maous	325	0	0	0	0	0	0	0
Lab Building Renovation - Maous	0	635	0	0	0	0	0	0
Dive Locker Addition	30	0	0	0	0	0	0	0
Floating Dock - Maous	70	0	0	0	0	70	0	0
TOTALS:	1,815	735	245	290	0	435	0	0

51-SMITHSONIAN ASTROPHYSICAL OBSERVATORY-WHIPPLE OBSERVATORY-51

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Road Repairs & Improvements	1,640	0	0	0	0	0	0	0
General Repairs-Whipple	300	0	0	0	0	0	0	0
General Repairs-Oak Ridge	160	0	0	0	0	0	0	0
General Repairs-Cambridge	70	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
No Projects Identified	0	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
Multiple Mirror Telescope Fire Protection	0	0	0	50	0	0	0	0
4. ACCESS SAFETY & SECURITY								
No Projects Identified	0	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
MNT Power Line	0	0	0	0	0	90	0	0
6. OTHER PROJECTS								
No Projects Identified	0	0	0	0	0	0	0	0
TOTALS:	2,170	0	0	50	0	90	0	0

BACKLOG OF ESSENTIAL MAINTENANCE & REPAIRS - SMITHSONIAN INSTITUTION - AS OF FEBRUARY 1, 1987

00-MISCELLANEOUS-00

	Exterior	Interior	Plumbing	Fire/Life	HVAC	Electrical	Energy	Telecom
1. GENERAL REPAIRS & IMPROVEMENTS								
Sidewalk Repairs & Parking Lot Improvements	250	0	0	0	0	0	0	0
Emergency Repairs Throughout the SI	500	670	0	0	0	0	0	0
Exterior Signage - Design & Implementation	350	0	0	0	0	0	0	0
2. FACADE, ROOF & TERRACE REPAIRS								
General Facade Renovations	1,000	0	0	0	0	0	0	0
3. FIRE DETECTION & SUPPRESSION								
No Projects Identified	0	0	0	0	0	0	0	0
4. ACCESS SAFETY & SECURITY								
Asbestos Abatement (Including Master Plan)	0	0	0	4,000	0	0	0	0
Security Lighting Mail Buildings/East Garden	0	0	0	2,150	0	0	0	0
Emergency Power Study/Design	0	0	0	400	0	0	0	0
Protective Barriers - South Quadrangle	50	0	0	0	0	0	0	0
Window Protection - NWSH, HWSB, WMAH	150	0	0	0	0	0	0	0
5. UTILITY SYSTEM REPAIRS & IMPROVEMENTS								
General Utilities Repair	0	0	0	0	100	100	0	0
PCB Abatement/Electrical System Coordination Study	0	0	0	1,500	0	0	0	0
Mail Master Raceway System	0	0	0	0	0	0	0	8750
Lightning Protection - Various Sites	0	0	0	0	150	0	0	0
6. OTHER PROJECTS								
Advance Planning & Design Funds	0	1,450	0	0	0	0	0	0
Combined Master Plan for SI Facilities	0	800	0	0	0	0	0	0
TOTALS:	2,300	2,880	0	8,450	250	100	0	8750

ATTACHMENT 2

Smithsonian Institution
Facilities Maintenance and Repair Requirements

	<u>FY 1988 Amount</u>	<u>Major Outyear Implications</u>
<u>Existing Facilities</u>		
Restoration and Renovation of Buildings	6,800	<p>The highest priority items in the additional FY 1988 R&R amount is for advance planning and design and a master plan and structural study (\$251,000). Other high priority items include funding for asbestos abatement (\$535,000), plaza replacement at the NASM (\$1,295,000), security projects at several buildings (\$1,485,000), roof, skylight and exterior repairs at the Renwick, NASM, STRI and other buildings (\$610,000), safety and fire protection work at Natural History, Freer and Cooper-Hewitt (\$580,000), utility work (\$1,280,000) and general repairs (\$180,000) at a number of facilities, relocation of the ADP facility at Natural History (\$400,000), and expansion of the photo storage vault at the American History Museum (\$200,000). Outyear requirements for funding levels of \$35 - \$45 million annually to correct the backlog of essential maintenance and repair will need to be supported with additional staff for program administration in OMC and maintenance and repair resources in OPlants (\$6E).</p>
Major Capital Renewal	1,250	<p>The FY 1988 amount for Major Capital Renewal includes design funds for asbestos removal and interim equipment replacement requirements at the Natural History Building. Annual funding of about \$10 million is projected in the outyears to complete work at NHB and begin planning for work at other buildings.</p>

(\$000s)

ATTACHMENT 3

March 9, 1987

Smithsonian Institution
Other Potential Programmatic and Facilities Requirements

FY 1988 /1
Amounts

Major Outyear Implications

Research

Scientific Instrumentation	300
--Submillimeter-wave astronomy	-0-
--Multiple Mirror Telescope Conversion	700
Scientific Equipment	1,300
Scientific Research Initiatives	300
History & Art Research Initiatives	1,400
Research Support	

The major instrumentation priorities for SAO focus on the development of two major scientific facilities: (i) a submillimeter-wavelength telescope array which would involve several, movable, electrically connected, telescopes to examine the universe with high angular resolution at submillimeter wavelengths; and (ii) the conversion of the MMT from a multiple-mirror instrument to one with a single, large mirror of 6.5 meter diameter which would have more than twice the light collecting power and nearly a hundredfold larger field of view than the original MMT. The total cost of the submillimeter telescope array is estimated to be 30 million (1987) dollars if built on a continental site; for an island site, such as Hawaii, the costs might be about 25% higher. Annual costs for operation of the submillimeter telescope array will be about 8% of the capital costs. The MMT conversion is estimated to cost the Smithsonian 10 million (1987) dollars. No additional operating costs are anticipated for the MMT after conversion. Cooperative agreements with other institutions for the design, construction, and operation of both these instruments are currently being developed. In particular, SAO intends to cooperate with the University of Massachusetts on the submillimeter telescope array and to continue the present cooperation with the University of Arizona for the MMT conversion. In order for SAO to be able to continue to carry out forefront astrophysics research, both of these instruments should be fully operational by the mid 1990s.

Recently the Museum of Natural History has indicated the need for \$6 million a year for reinstallation of exhibitions. Major needs remain to continue the move of the collections to the Museum Support Center and for additional collections storage equipment to make the MSC fully operational.

Museums

Reinstallation of Exhibitions	500
Other Exhibitions	500
Collection Acquisitions	600
Collections Management	1,600
Automation	500

(\$000s)

ATTACHMENT 3

Smithsonian Institution
Other Potential Programmatic and Facilities Requirements

FY 1988 /1	Amounts	Major Outyear Implications
<u>Public Outreach</u>		
Education	700	Over the FY 1989 - FY 1992 period, planned Quinquenary activities, as identified in the Five-Year Prospectus, would require an additional \$6.9 million.
Columbus Quinquenary	400	
<u>Administration and Facilities Management</u>		
Administrative Support	700	Outyear growth needs in the Administration and Facilities Management activity concentrate on security, preventative maintenance and craft support of programs (\$3.5 million), safety programs (\$300,000) and strengthened accounting personnel, procurement and property management (\$400,000).
Facilities Management	1,800	
Safety Programs	1,300	
Security	1,200	
<u>New Facilities</u>		
Construction	1,350	Highest priority in the additional FY 1988 Construction amount is funding of planning capabilities to develop and refine estimates and plans for future facilities requirements; funding for replacement of laboratory on Barro Colorado Island at the Tropical Research Institute (STRI) is important to provide adequate research facilities. Projections for subsequent years include further facilities at STRI for maintenance and laboratory support (\$4.9 million) consistent with the authorizing legislation and renovation of the General Post Office (\$40+ million).
---Planning	2,800	
---BCI Laboratory and Research Facility		
<u>NZP Construction</u>		
NZP Construction	3,700	The additional FY 1988 amount is for renovation of the old hospital building into a modern research facility. Projects included in the Master Plan for the outyears include Aquatic Exhibits and Grassland and Forest Exhibits.

BOARD OF REGENTS

Mr. YATES. And they tell the story of where you are and where you hope to be going.

All right. Does OMB know this?

Mr. ADAMS. I guess I would have to ask, has a copy gone to OMB of those submissions?

Mr. YATES. Should not a copy go to OMB?

Mr. JAMESON. I would have no hesitation to send a copy to OMB.

Mr. YATES. Oh, incidentally, does your Board of Regents know about this?

Mr. ADAMS. There has been no meeting of the Board of Regents since this was prepared.

Mr. YATES. Do they know about it?

Mr. ADAMS. They certainly will receive this.

Mr. YATES. Do they know about the extent of your problems and your commitments?

Mr. ADAMS. The full pulling together of this has only gone on in the last month or so. We missed our January Regents Meeting because of the blizzard, so there has not been an opportunity.

Mr. YATES. When is your next meeting?

Mr. ADAMS. It comes in May, and it will come up then. This material will be available and it needs to be discussed.

Mr. YATES. Will this require a formal approval by your Board of Regents?

Mr. ADAMS. This is informational material in this form. I do not think it requires formal approval. Obviously, they can take action if they choose to.

Mr. YATES. Is this not something that your Board of Regents ought to approve? They will consider it; but is this something that should take the form of a resolution urging you to go ahead with the program?

Mr. ADAMS. I certainly have no difficulty in bringing it to them for direction. It is part of our rolling five-year projection, in any case, and it will come up in that form. Actually, as you know, it exceeds our five-year limit. We are looking toward a longer time period.

Mr. YATES. They will have to know that, too.

Well, you are going to bring it up and from then on it is their decision as to how far they want to go with it.

Okay. Mr. Boland, any questions or suggestions?

Mr. BOLAND. With respect to OMB, your relationship with OMB, I take it, is extremely good?

Mr. ADAMS. Yes.

Mr. BOLAND. I get a look at 17 other agencies with budget authority of about \$60 billion, and I must say that the Smithsonian does a lot better than a lot that I have seen.

Mr. ADAMS. It has been an extremely fine relationship. They have been supportive sometimes on the very eve of sending in the budget.

SUMMER HOURS

Mr. BOLAND. You are going to extend the visiting hours after Easter, late at night and through the rest of the year; is that right?

Mr. ADAMS. Through the summer; through the high summer season.

Mr. BOLAND. Is the cost here built into the budget?

Mr. ADAMS. That will take place during the current year, so it is not in the 1988 budget we are looking at. But it is covered with funds that we do have available.

SECURITY

Mr. BOLAND. What about guard coverage? Your statement indicates some concern about guards. Is it a real problem?

Mr. ADAMS. I think there is a problem. We can ask Mr. Jameson to address it, if he would.

Mr. JAMESON. We have approximately 560 authorized positions. It is down about 15 percent, a little over 80 of those are vacant. A portion of that downage is attributable to the increasing problem of finding qualified people, operating as we do by law under Veterans' preference. I am a veteran, I served 20 years, but it gets more difficult to find people who are qualified. About a third of that 80 is attributable to the fact this year we are absorbing, by instructions from OMB, the pay costs this year and the retirement system, which we estimate for our security operation to be around \$500,000 or so.

Part of it is attributable to a pay shortage that we have been carrying for a couple of years, which results from some, understandable from your perspective, cuts made in the 1986 appropriation.

Mr. BOLAND. Do you use part-time guards?

Mr. JAMESON. We do use temporaries, and we have had a couple of experiments, which have been of middling success, with the use of contract guards for very non-sensitive posts. But that has been our only experience with that. It has been our conclusion with long experience and advice from outsiders that the best force is, one, we get in and try to keep trained, making them part of the Smithsonian family, get them experienced with the exhibits we have, and try to make them an integral part of the total operations.

VISITOR ATTENDANCE AT NASM

Mr. BOLAND. I notice that the attendance figures at the Air and Space Museum dropped by about 9 percent in 1986. What is the reason for that? We always brag that we get a lot of visitors on the Hill, all Congressional offices do, and that is one of the museums we brag about and most people like to go to.

Mr. ADAMS. That is a significant drop.

Mr. BOLAND. It is a significant drop. What is the reason for it?

Mr. ADAMS. It certainly has to be related in a fundamental way to the closing of parking during the course of the year, just prior to the high summer season, in fact. How many of those visitors were, in fact, parking in the Air and Space Museum and being logged in as visitors but, in fact, walking out the door and going to the National Gallery, I am not altogether clear on. Problems like that are somewhat obscured by the way we keep figures. But, undoubtedly, the closing of parking had a major effect on that figure.

DULLES FACILITY

Mr. BOLAND. Let me ask you about the assurance of the physical security of the Enterprise at Dulles. OMB zeroed out every request for funding for it?

Mr. ADAMS. That is right; they did. There is no funding for it.

Mr. BOLAND. What was the request to OMB for that activity?

Mr. ANDERSON. If I can interject, Mr. Boland, there were two different kinds of proposals with regard to the long-term protection of the Enterprise. One had to do with a legislative proposal which would have authorized the construction of a major public facility out at Dulles International Airport, for the long-term care of the shuttle. And that piece of legislation, as you probably know, did not go very far in the last Congress.

The alternate proposal, which was to provide temporary non-public protection of the shuttle, simply by erecting a little more than a roof over it to protect it from the elements, is going forward later this spring and early summer, using dedicated trust funds available to the National Air and Space Museum under the Ramsey Trust, which was established some years ago. And that will be accomplished without expense to the taxpayer.

Mr. BOLAND. Thank you, Mr. Chairman.

Mr. YATES. You have brought some goodies in this morning, so-called goodies. Would somebody like to tell us what they are?

ENGINES OF CHANGE

Mr. ADAMS. I suppose I have a list here someplace.

Mr. YATES. This is a book put out by the Smithsonian Institution Press, called "Engines of Change."

Mr. ADAMS. This accompanies the new exhibit that I would encourage you to visit in the Museum of American History, devoted to the industrial revolution in Nineteenth Century America. We are very proud of it. We think it is one of the series of new permanent exhibitions there that, in fact, open up the Museum of American History in marvelous new ways.

Perhaps Roger Kennedy would like to say a few words about the matter.

Mr. YATES. Are all of these Roger's?

Mr. KENNEDY. No.

Mr. YATES. I did not know, Roger. You were looking at me askance. What do you want to tell us about your exhibits? We will start with you and go around to all of the museums.

Mr. KENNEDY. Back here are a couple of additional things that cannot compete with the black hole, but they are representative of the range and spread of things we do. "Engines of Change" is a scrutiny of the United States as a developing country with regard to the industrial system. It is, as the Secretary said, one of that series of permanent reinstallations that you are paying for in association, however, with private fundraising which we seek to match your money with.

Just above that is a pamphlet that reports, I think, on a series of conferences which we have held.

AMERICAN HISTORY ACTIVITIES

Mr. YATES. The pamphlet called "Race and Revolution."

Mr. KENNEDY. Yes. We have been successful in recent years in making our place a center for the study of relationships between blacks and whites in America over time in a range of ways. This was a series of conferences with major universities and colleges along that line, and a stepping up of our own activity leading to another show which is called, "Field to Factory," which deals with the movement of blacks from the rural South to the urban North.

Just below your left hand, Mr. Chairman, is a collection of cassettes that proceeds from our musical instruments collection. That is a major, scholarly study of the work of Mozart, performed on the original instruments in our own collections and, more important perhaps, rooted in the kind of scholarship that goes into being able to play those instruments in the original fashion.

It is not enough just to have someone tinker with them unless they know what those performance practices were. That requires scholarship, practice, and skill.

Just again, to again extend a sense of the range of things that we treat as American history, here is a pillow. This we thought we might need later on in this morning's hearings perhaps.

[Mr. Kennedy dons white conservation gloves.]

Mr. YATES. You look like Alan Alda in MASH.

Mr. KENNEDY. Well, that show is on the road without Mr. Alda, but MASH, as you recall, we used as a way of inquiring into the way in which one decade looks at the events of a preceding decade. MASH, as a show, was allegedly about the Korean War. It was, of course, actually about the Vietnam War, which was going on at the time the show was produced. The interesting thing we did about the show MASH is that, of course, television is a mode of commenting on the present as well as the past, and our business is commenting on television commenting on itself and learning therefrom.

THE NATIONAL BANDSTAND

We have a very large collection of band instruments. We have built a bandstand which, commencing this summer with private funds, we are going to be performing regularly in the National Bandstand. This is part of a 1,500-piece collection of memorabilia of that art form which calls together American communities for about a full generation as the only place where they could collect, as they did, in fact, around the National Bandstand. The National Bandstand, which was in Jacksonville, Illinois, is on 12th and Constitution.

That phenomenon is more interesting than just a pillow. People could come together in a central place to share their central concerns after certain other community organizations had withered and died in America in the Nineteenth Century. And the bandstand, like the black hairdresser's salon, was a place in which people could gather who had no other place to gather. That had both political and social consequences of some significance.

This was purchased with your money, and we thank you for it.

DIZZY GILLESPIE'S TRUMPET

This was not. This was Dizzy Gillespie's trumpet. A couple of interesting things about it. Not only is Dizzy Gillespie a great performer, but he is a great expositor of the role of technological change. This is not Dizzy's invention, but Dizzy saw somebody using an amplifier on a conventional trumpet and getting it away from the cheeks. He picked it up and made it a part of the band playing process that has come into other people's use.

We got, at the same time, of equal significance to social historians, Dizzy Gillespie's toothbrush. But it came in the package and we certainly want to leave it to future.

I am going to hand this to a competent person. Martha Morris, our Registrar, who knows how to put the box together.

All this is simply to say, as those catalogues do, that what publication is and what the fusion of knowledge is for us includes performance, performance rooted in scholarship, performance in all kinds of places for all kinds of people, about all kinds of people. We do not limit our franchise, therefore, to traditional European Nineteenth Century music or to the story of great famous people, generals, admirals and presidents, or even Congress people. We try to deal with the lives of all those folks that comprise the American community.

ROOF OF AMERICAN HISTORY

Mr. YATES. Very good.

I have witnessed some of your shows and have participated in some of your celebrations.

Is this budget adequate for your purposes? I know budgetary constraints have a leavening effect. With that in mind, are you being given the opportunity to do what you want to do at the American History Museum, or what should you have that you do not have?

Mr. KENNEDY. Sure, Mr. Chairman. Within what is reasonable, we are. I would like to underline what the Secretary and the Under Secretary said to you about the necessity for keeping the base from crumbling.

We are dealing with leaks in the roof like everybody else.

Mr. YATES. I thought we fixed your roof.

Mr. KENNEDY. You gave us—

Mr. YATES. We gave you money.

Mr. KENNEDY. To fix part of the roof, and we are continuing to do that. I am not complaining about fixing the roof.

Mr. YATES. I am though, because you jeopardize your artifacts if the roof is not fixed. And I wonder, Mr. Siegle, tell me about Mr. Kennedy's roof.

Mr. SIEGLE. There is a major contract underway at the present time for replacing and repairing of windows, facade, and the roof, and what have you. The scaffolding is up all around that building.

Mr. YATES. Then you have enough money to take care of his roof?

Mr. SIEGLE. Yes. It is just that it has not been completed yet.

Mr. YATES. Why are you so slow, Mr. Siegle?

Mr. SIEGLE. Well, we do have projects that we are addressing in the 1988 budget, totaling about \$3 million for that building.

ROOF REPAIR NEEDS AT SI

Mr. YATES. What jeopardy are your things in, in the interim, because you are not going more quickly? I mean Mr. Kennedy's roof is not fixed. Are there other roofs that are not fixed yet?

Mr. SIEGLE. Yes.

Mr. YATES. All right. As a result of the roofs not being fixed, are the Smithsonian possessions being jeopardized in any way?

Mr. SIEGLE. Yes, they are, in some cases. In NASM, for instance, we have aircraft that have had water drip on them and so forth. We are continuing to ask for funding in the R&R program to address those problems. We have money we are requesting in FY 1988, for instance, for NASM and some of our other museums.

Mr. YATES. Is this the reason why your predecessor resigned? I thought that when he appeared that we gave him everything he wanted to put the roof in shape. What was his name, Mr. Peyton?

Mr. SIEGLE. Peyton. There has been a tremendous amount of work done on roofs, but it is a constant thing. Every year there is more work to be done on other buildings.

Mr. YATES. Do you mean you cannot fix a roof so that it stays fixed?

Mr. SIEGLE. I am talking about different buildings. It is not the same roof on the same building.

Mr. YATES. I thought I had asked Mr. Peyton to tell us the condition of all of your roofs.

Mr. SIEGLE. We have about a million square feet of roofs. And each year some come up for funding. Some years they are funded. If they do not get funded then there is a backlog.

Mr. YATES. I have the impression that you run your galleries like the National Cathedral. There is scaffolding up there all the time and you are repairing it.

When are you going to get to Mr. Kennedy's roof?

Mr. KENNEDY. They are on the roof, Mr. Chairman, and they will stay there for awhile until it gets fixed. More broadly speaking, the 1988 budget request—

Mr. YATES. Let me just interrupt you. Mr. Jameson, did this Committee give you money for roofs?

Mr. JAMESON. You give us money most every year for roofs.

Mr. YATES. No, we gave you an expanded amount for roofs and took the position we wanted the roofs fixed and the walls fixed.

Mr. JAMESON. You asked me at a previous hearing if we have any leaks and I said no, and even Dr. Lawton said he was having no leaks. We were right at that moment, but we continue to have leaks. Even recently, in the Arts and Industries Building, which has a new roof on it, during the last snow storm we had leaks in that building because the ice was building up on the eaves back to the point where water could get under the flashing. So our next approach to that roof, and maybe we will have to do this in other areas, will be to put heating cable in selected risky areas to guard against that happening.

Mr. YATES. What is the total cost of repairing the roofs likely to be? Do you have any idea? Is that in the figures the Secretary has put in the record?

Mr. SIEGLE. Yes, we have figures in our 1988 budget and then our backlog too, of course. We are talking millions of dollars, several million dollars. I cannot give you an exact number, but we will get that.

[The information follows:]

Current roof repair/replacement requirements of Smithsonian buildings

<i>Facility and project</i>	<i>Estimated cost</i>
Current work previously funded (through FY 1987):	
American History building, roof replacement.....	\$1,210,000
Arts & Industries building, roof replacement/facade renovation.....	12,900,000
Freer Gallery of Art, roof replacement	400,000
Air and Space Museum, skylight replacement study	15,000
Total available for current work.....	14,525,000
Identified funding requirements:	
Projects included in the FY 1988 budget request:	
Cooper-Hewitt Museum, roof repair.....	50,000
Silver Hill facility, building 10 exterior maintenance	30,000
Subtotal	80,000
Work included in the backlog of essential maintenance and repair:	
Natural History building, roof repair.....	100,000
Air and Space Museum, roof repair	900,000
Air and Space Museum, skylight replacement.....	4,500,000
Air and Space Museum, interim skylight repair	250,000
Renwick Gallery, roof repair.....	125,000
Cooper-Hewitt, roof replacement.....	275,000
Tropical Research Institute, roof repair at various locations.....	200,000
Subtotal	6,350,000
Total identified requirement.....	\$6,430,000

Mr. YATES. Well, okay. How do we take care of all the leaks?

LONG RANGE ROOF MAINTENANCE PROGRAM

Are you going ahead as quickly as you should, or does the deterioration process continue even while you are repairing?

Mr. SIEGLE. We would like to prepare a long range roof maintenance program and send it to you each year as part of our R&R program, and do a regular program each year. It is not the kind of a thing you can fix and never have to come back for any other repairs. But it is the kind of thing you need to fund every year, an increment of that each year, or you get behind in roof leaks.

Mr. YATES. Is that in this budget?

Mr. SIEGLE. Yes, sir, we have money in there.

Mr. YATES. Have you got enough money in here to do the work that has to be done?

Mr. SIEGLE. Well, for instance, on the NASM roof, we have money in the expanded list of needs you requested for some repairs, and we are conducting a study for the total fix.

Mr. YATES. Is this a band-aid approach that you are taking on the NASM roof?

Mr. SIEGLE. No, what we are doing is asking in 1988 for funding for some interim repair and——

Mr. YATES. How long will the study take?

Mr. SIEGLE. About six months.

Mr. YATES. Mr. Jameson?

Mr. JAMESON. The current funding level in our R&R account of \$14 million, obviously, is band-aid. We try to do in each category of our work what appears to us as the most urgent, whether it is new facades or whether it is PCB elimination or asbestos or access for the handicapped, fire or whatever.

Mr. YATES. Is the Secretary's estimate that he put into the record a band-aid approach?

Mr. JAMESON. Of \$30 or \$35 million or more, we will certainly much more quickly accomplish all of the urgent work in the Institution, including roofs and other categories of work. Even at a higher level, however, each aspect of the most important priorities will have to be addressed in the budget.

Mr. YATES. Mr. Siegle speaks about a need for a study of Mr. Kennedy's roof. Do you have a study of the condition of your establishment?

Mr. JAMESON. Yes, sir. We are in the process of doing a building-by-building inventory of conditions. That work is underway and will continue. And, on the larger projects, we need to call in specialized talent. For instance, on the HVAC System in the Natural History Building, we will spend money to bring in a qualified contractor, or consultants to do those kinds of technical surveys.

Mr. YATES. The request the Committee has given to the Secretary for the projections are what he needs to do to get all of the work done. Now, I assume that the figures he has put in here are his best estimates of all the money you will need for that purpose.

Mr. ADAMS. Mr. Chairman, I would suggest that there are not too clear-cut categories, a band-aid approach on one end and a complete job on the other. You are always going to be making judgments as to how far to go in what is a continuing effort.

Mr. YATES. What we are asking for is your best judgment at this time.

Mr. ADAMS. I think that would be our best judgment at this time.

STORAGE SPACE AT AMERICAN HISTORY

Mr. YATES. Roger, I interrupted you in full flight. You may take off again.

Mr. KENNEDY. Well, in the 1988 request, we have asked for increases in a range of items that are related, I think, in every instance to things you have heard about generically. For example, the rather dull sounding title of "Overall Space Planning" or "Comprehensive Future Planning" really deals with the problem of storage. What do we do with the National collections? What do we do with the deteriorating facilities, which are literally falling apart at Silver Hill? How do we replace them? How do we cope with a very limited amount of additional collecting?

In our projections, we have talked about a two percent rate of increase in the National collections over the next five or ten years. But the fact is, the places into which we are now putting these materials, not just us, but all of the other collecting museums, are themselves falling apart. They are deteriorating. The most obvious cases are buildings at Silver Hill. But, within our own place, the

existing storage facilities are not only inadequate, 30,000 or 40,000 square feet, in our case, but they themselves are physically falling apart.

That is a second component of this difficulty in keeping the base secure.

REINSTALLATION AT AMERICAN HISTORY

So, when we are asking you for, in our case, \$147,000 for master plan and exhibit reinstallation planning funds, that is simply the necessary preliminary to our telling you in an orderly way what has to be done to take care of the National collections.

The same things for the process of continuing this reinstallation affects us, Natural History, and other museums. We will reinstall the public materials that are guided by the scholarship that has gone on in the last 20 or 25 years. We have learned a whole lot about the American experience. We have learned a lot about all the other disciplines in the Smithsonian.

When we reinstall, we are, at the same time in every instance, cleaning, taking care of these items, and then diffusing what they tell us; telling the American public why these things are significant in the juxtapositions that are newly available to us. We understand how things belong with each other in ways we did not understand 25 years ago. And, of course, we are including people that just did not get into the story before, not just blacks and Hispanics and Native Americans, but all kinds of people whose story was not told and was not known.

That is a second component of our asking for increases in that reinstallation process; it really is an increase in our capability to help build an American community by including people within our story which has been very partial up until now.

COLUMBUS QUINCENTENARY

An illustration of that, in relatively small quantities, is \$50,000 or \$60,000 we are talking about for the Columbus Quincentenary. We have no intention of dealing with another celebration of the arrival of a bunch of Europeans on the shores of, in the old story, an empty continent. We found that it had people in it. And it was the interactions of the people that were in it and the people who came to it that makes the story interesting, and the continuing interactions, abrasions, learnings, transfers of disease, ideas, artifacts and modes of civilization, religion and other forms. Those interactions are part of that story.

As we move towards 1992, each of us in many bureaus in the Smithsonian are going to be trying to cope better with that process of interaction, what has happened to us. And, of course, what we are doing is making it possible for all Americans to understand that this has not been a triumphant story of European exploitation of the empty Continent, but, instead, the interaction of African Americans, Asian Americans, and European Americans upon the terrain.

DUKE ELLINGTON COLLECTION

We have asked for additional dough from you, \$300,000 to be added to the half a million dollars that we got from you all to take care of the treasure trove of Duke Ellington's material.

It is very hard until you actually get your hands on it to understand how important that sort of thing can be in American culture. It is as if we suddenly found a house in Salzburg full of everything that Mozart had accumulated over a lifetime, and nobody knew it was there.

Mr. YATES. And Kern.

Mr. KENNEDY. Yes, but more so, because those are just scores. But what we are dealing with here is correspondence, photographs, gig records. Where did they work? With whom? What kind of circumstances? What did they think of each other? Notes. It is an extraordinary archive of materials that shows the interaction of the business of music, musicians working together and across a much wider spectrum than most of us who think of Ellington as a band-leader and a composer of songs know about. There are ballet scores. There are movie scores. Well, what happens is you get increasingly excited about what you can learn about the whole range of American experience, not just music, but among blacks and whites during a long period. So thank you for the half a million dollars we got at the very end of last year.

We have negotiated a deal with the Ellington Estate in which they are essentially going to be giving us a chunk of it, and we will, as we said we would to you and to Congressman Stokes, who took the lead in this process, we will use about \$200,000 of that five to rescue this collection from its very rapid deterioration.

Once again, it is as if you had all of that Mozartiana sitting in a cold warehouse for a very long period of time falling apart. That is what has happened to this.

But, as we proceed, we now know that we have got to do with it every year more and more things, with this and associated things, to let the American public know a little more about this extraordinary figure. We have got to annotate it so that it gets taken seriously by colleges and universities who will not use it if it is just the tapes. We have got to publish it and record it. If we could do it for Mozart, we sure can do it for Ellington.

And we have over time a kind of measured archival program, so we will be back to you every year for quite a spell, trying to do right by this discovery.

Mr. YATES. The fact you are doing it for Ellington makes me wonder whether anybody has brought up the question of Scott Joplin.

Mr. KENNEDY. Yes, and one of the nice things about this process is we discover who knows what about what.

It happens that we have hired probably the best Joplin expert in America on the staff, John Hasse. So we have got somebody in the house who knows about that.

JAZZ PROGRAM

Mr. YATES. You and Mr. Rinzler were engaged in a Jazz Program or a gathering in of that?

Mr. KENNEDY. Yes.

Mr. YATES. What is going on with respect to that?

Mr. KENNEDY. Mr. Rinzler can describe his set of relationships to folk and jazz greats of the moment.

Mr. YATES. How is that being funded? That is what I am trying to find out.

Mr. KENNEDY. We are raising money all over the place.

Mr. YATES. From private sources?

Mr. KENNEDY. Yes.

Mr. YATES. Do you get any money from the Government?

Mr. KENNEDY. For the Jazz Program, I think the answer is in this next fiscal year, no, because the obligation to provide for continuous performances of a fully annotated urtext of America's basic jazz classics, that program of arranging for continuous programs of performance, which is, obviously, the mode of publication that matters, we are not quite ready for.

I do not want to answer for brother Rinzler, however. He may want to answer that question differently.

I just want to make the serious point that until we get down on paper the basic works of the American jazz classics, while there are still jazz musicians alive who can do that with us, for us, the improvisatory form improvises around some fixed points, and those fixed points are not known. They are not there. We have got to get that done fast.

Mr. YATES. Who do you work with on that? Does the National Endowment for the Arts help you?

Mr. KENNEDY. No, sir, not in any formal way, they do not. You can count on the fingers of one unbruised hand the number of people who are really useful to work on this kind of subject, and they all know each other. Some of them are in the Smithsonian.

The National Endowment for the Arts and the National Endowment for the Humanities both have interests in this field. And I hope before this fiscal year is at an end we will be back to you with a coordinated program with the two Endowments in which we will say, this is what we will do and this is what we hope they will do. So we will get on with this. We have been talking about this, as you and I both know, for many, too many years.

VANDALISM

Mr. YATES. All right. Have you been vandalized at all?

Mr. KENNEDY. Not in any significant way this year, no. People rip things off here and there, but nothing that we were not expecting.

Mr. YATES. Any thefts?

Mr. KENNEDY. I would like to tell you about that off the record, if I may, sir.

Mr. YATES. All right. We will go off the record. Off the record and clear the room?

Mr. KENNEDY. No. There is an FBI process underway, and it seems wise not to—

Mr. YATES. We will learn that off the record later.

And any major crumbings of your structure that we ought to know about?

Mr. KENNEDY. Not beyond those previously reported, sir.

SAFETY OF VISITORS

Mr. YATES. Okay. Anything else? How about health and safety of your visitors?

Mr. KENNEDY. Health and safety of visitors is in satisfactory condition. Lighting could be improved, but the obvious things like asbestos are under control in the building itself.

Mr. YATES. What about your alarm system and your guards?

Mr. KENNEDY. Not sufficient, and probably will not be, because we do the best we can. There is a kind of limit. It is an insurance policy, and you do the best you can reasonably within the budget you have got. Of course, each of us would like more guards and each of us would like a little more money to take care of better alarming. But I cannot dispute the general balance that has been struck here.

Mr. YATES. Is there any connection, do you think, between what you have lost off the record and—

Mr. KENNEDY. No, I do not think so.

Mr. YATES. All right. Thank you very much.

CONSEQUENCES OF GROWTH

Mr. ADAMS. Mr. Chairman, could I say the example that you have been discussing with Mr. Kennedy is, I think, a very interesting one, as indicating the long-term processes of growth and pressures that we suffer from.

The acquisition of the major collections in the form of the Ellington material makes the Institution much more visible in an area where its program was already present, but simply not as well known. Collections breed more collections. You become a focus of activity and concern and people begin to come in and study them. And there is a way in which a critical mass—that is, the black hole, if you wish, of Dr. Shapiro—attracts more of the same. And these are national collections. I am not regretting that at all. All I am saying is one has to look at the long-term consequences which do involve a steady process of growth.

Mr. YATES. I was just going to say I see that has already had its effect on Mr. Kennedy's Museum. Collections acquisition, which was \$330,000 in 1987, has been cut by \$250,000 to \$80,000.

Mr. ANDERSON. I do not believe that is correct, Mr. Chairman.

Mr. YATES. The Duke Ellington acquisition was a one-time acquisition?

Mr. ANDERSON. Yes.

MADE IN AMERICA EXHIBITION

Mr. YATES. All right. Mr. Regula?

Mr. REGULA. Thank you, Mr. Chairman.

Mr. Kennedy, I was interested in your stating in here your reinstallation of "Made in America," scheduled to open in April, 1988. I have some interest in "Made in America." I would like you to amplify a little bit on what is involved.

Mr. KENNEDY. I have gotten about a million dollars from a major American company, the Du Pont Company, to help us do some-

thing we would otherwise have done with Congressional funds. That is a significant point in itself, though we do not cut to order for corporate buyers, anything we do. We provide an orderly series of reinstallations of things we think are in the National interest to do, and then we provide them as a smorgasbord to corporations or foundations to buy those they want to buy; but we do not change the subject matter. In this particular instance, it is important because, obviously, this is a subject that could be any number of things that you want to do with it.

This is a show about tool-making, I guess, in a large way, if you include tools as tools, buildings, locomotives, or any other thing that is the result of the application of human will and intention upon the materials that you have naturally in the setting.

The point of the show is that we came to not an empty Continent, but to a Continent with many natural resources in it and, because we wanted to, we created out of those materials a lot of objects and things—screwdrivers, buildings, boats, all sorts of stuff. In turn, the environment we create out of the tools we make alter us as a consequence.

Now, that show is an effort to help people who come to say to themselves, "Gee, I had never thought of a television set as being made up of all these different kinds of materials, and bits and pieces."

What we want to help people do, therefore, is, in our museums, to get used to looking at objects both in terms of their social significance and metaphorical significance, but, also, in terms of their chemical and physical makeup. So that if we can, we can induce people who want to do two things: First of all, get into physics and chemistry a little more and start understanding how things get put together.

And, secondly, get interested in invention. We are big on invention in our place. We think it would be wonderful for more people to get a kick out of making something new that is useful, but also to understand when you make something which is useful, you are responsible for the consequences.

I would be delighted to ship you the current outline of that show. We are very excited about it. We think it is going to be dramatic, as well as instructive.

Mr. REGULA. Great. I like the idea. My concern is that display in the future, will have to be put where you have things of 50 years ago made in America.

Mr. YATES. Could you have a mock-up on a smaller scale of how a drill rig is made in America?

Mr. REGULA. I think that would be great. At your suggestion, Mr. Chairman, he may want to do that.

I think it would be very interesting to have a platform that is used to drill for oil in the ocean, because the technology is fascinating and it relates, of course, to the development of resources essential to this country.

Mr. KENNEDY. If we might return to this Committee in a different setting, my own sense of it is a drilling rig is like, in its appearance, very much like a windmill, and we have some thoughts about drilling rigs and windmills, as a composition on the outside of our

building. And it will take some money, and we will talk to you about it.

Mr. REGULA. Do you have any schematics anywhere?

Mr. KENNEDY. That is a part of another inquiry we are getting into, and we will talk to you about that, Mr. Regula.

Mr. REGULA. Thank you.

Mr. YATES. All right. We have taken care of the American History Museum. Perhaps just to finish off Mr. Kennedy's testimony, Mr. Rinzler, did you want to say anything about any aspects of the jazz initiative that you and he are engaged in?

Mr. RINZLER. No, sir. I think it is really not appropriate here, because the funding is entirely trust at this time and it is in good shape.

Mr. YATES. Okay. No request here?

Mr. RINZLER. No.

Mr. YATES. Nothing we should know about except it is in good shape.

Mr. RINZLER. Not yet, sir.

Mr. YATES. Well, would you two like to caucus?

Mr. KENNEDY. No, that was just reiterating what I said to you earlier; we will be back to you.

Mr. YATES. Okay.

All right, let us take up the National Portrait Museum. I suppose I should take up Mr. Freudenheim.

Mr. Freudenheim, is there anything you want to tell us about the Museums before I go to your individual and collective directors?

Mr. FREUDENHEIM. I think the people who can speak to them best are the people who run them.

Mr. YATES. That is why the Committee has the habit of calling them in.

Mr. FREUDENHEIM. I look over their shoulders.

Mr. YATES. So you and I are both going to learn then.

Mr. FREUDENHEIM. That is right. They are the best spokesmen. We have extraordinary people running them, and they are the best spokesmen for their museums.

BUDGET NEEDS AT NATIONAL PORTRAIT GALLERY

Mr. YATES. All right, let us turn to another of my favorite galleries, the National Portrait Gallery.

Mr. Fern, would you like to come up and sit alongside Mr. Anderson, or do you want to sit down at that end? Either way, tell us about the National Portrait Gallery.

Are you in good shape? Your shows are very handsome, beautifully hung, with the minimum funds you receive. Are there things you want to do that you cannot do for lack of funds? Are there collections you cannot take or you cannot acquire, let alone collections or individual portraits?

Mr. FERN. That will always be a problem, Mr. Chairman. I would like gradually to be able to have more acquisition funds, but I am restraining myself in this time of budgetary—

Mr. YATES. What are you losing as a result of restraining yourself in this time of budgetary limits? What have you lost? Do you

have an opportunity to pick up any good portraits that you could not get?

Mr. FERN. If you ask me that, there is one work that we lost because we did not have enough funds, but I could not reasonably have expected to have that much money. That was a portrait of David Rittenhouse, by Charles Willson Peale, that came up at auction. Being at auction, we would have had to find the money quickly. It went for around \$400,000, as I remember.

It would have been great to acquire. Rittenhouse was a very important scientist and Peale a very important artist, central to our interest. But that kind of thing does not happen too often and I am glad to say that the person who did buy it at auction has loaned it to us, and one day perhaps he will decide it does not fit in his house and we may acquire it. It may be a blessing in disguise.

Mr. YATES. Is there a tax deduction for a loan?

Mr. FERN. No.

Mr. YATES. For a gift there is still a tax deduction, but for a loan there is not. And this is for an indefinite period?

Mr. FERN. Yes.

Mr. YATES. Good for him.

Mr. FERN. We have just put in motion the acquisition of a very fine Benjamin Franklin painting. Here I think we can get some private funds. I am going to try to. We will bankrupt ourselves in our current appropriations if we do not get any outside money, but we will get this picture. It is very beautiful and a very major picture.

Mr. YATES. What is the level?

Mr. FERN. It is \$80,000.

Mr. YATES. That is all for Dr. Franklin? Was he not as great a scientist as David Rittenhouse?

Mr. FERN. That is correct, and it is one of the most beautiful portraits of Franklin that could be available to us. It is a great bargain.

Mr. YATES. Have they offered it to you?

Mr. FERN. Oh, yes. We have an export license from the country abroad where it was.

Mr. YATES. Where was it?

Mr. FERN. France.

Mr. YATES. Was it painted by a Frenchman?

Mr. FERN. Duplessis. This is the kind of thing that we can barely acquire at our current level of acquisition funds. We do not have any money left.

Mr. YATES. Do you not have a pool for acquisitions whereby one museum gets the benefit one year?

Mr. FERN. Mr. Chairman, I dined so amply at that table, even eating from somebody else's tray, that until next year there is not a chance that I can get another nickel.

Mr. ANDERSON. The pool replenishes, Mr. Chairman, at five-year intervals.

Mr. YATES. Do you ever borrow money from that tremendous bank—the Smithsonian unrestricted trust fund?

Mr. FERN. I may well do that for the Franklin.

CONSERVATION NEEDS

As far as other things in our program, really my needs tend to be in the field of collections management and administration. You have been helpful in this in the past. We were able to add some help to our collections management staff. And we have a request now for a conservator since we did not get a position in past years.

Mr. YATES. Do you do your own conservation work?

Mr. FERN. Yes, we do. We have three now, two conservators and a person who mats and frames pictures.

Mr. YATES. Is there a central pool of restoration and conservation for the Smithsonian?

Mr. FERN. There is a conservation analytical laboratory which will deal with complex things.

Mr. YATES. Do each of you have your own conservation? Is that necessary? Would you be better off if you had something like a stenographic pool that you tap? Or would that be impractical?

Mr. FERN. My view of it is that no museum can be without this because the workload fluctuates.

Mr. YATES. I might immediately think of the Freer. The Freer has some kind of Japanese restorers.

Mr. ANDERSON. The materials are different, Mr. Chairman. The Freer has to worry about bronze disease and many things that would not be a serious factor in the Portrait Gallery.

Mr. FERN. And sometimes when we have an exhibition, for example, coming in, we need to check the condition of works when they arrive, and again before they can be shipped. And we need people who can do that.

ROOF AT NATIONAL PORTRAIT GALLERY

Mr. YATES. What is the physical condition of your outfit? Is your roof leaking?

Mr. FERN. Our roof is not leaking. Our sky light is leaking though. I think that is due to the heavy snows—not to Mr. Siegle or Mr. Peyton. They have worked hard on the building. We have a whole new roof there.

VANDALISM

Mr. YATES. Any vandalism?

Mr. FERN. No, not recently. A couple of years ago we had that New Years Eve theft of the documents near the painting of Grant and his generals. The FBI did a marvelous job. They recovered them and, I believe, booked the perpetrator.

Mr. YATES. I commend you for your show. Your shows have been just beautiful and spectacular.

Mr. FERN. Thank you, Mr. Chairman. We are opening a couple of good ones in the coming season, and I hope you will see them.

Mr. YATES. I hope so. Is there anything else you want to tell us?

Mr. FERN. Not at this time.

Mr. YATES. Thank you.

HEMPHILL COLLECTION

All right. Mr. Eldredge on Museum of American Art.

How are you doing, Mr. Eldredge?

Mr. ELDREDGE. Fine, thank you, Mr. Chairman.

Mr. YATES. You have spectacular shows. You put out the book on Davis, did you not?

Mr. ELDREDGE. Yes. Among that stack of publications, you have the "Memorial Catalogue" of Davis' works.

Mr. YATES. It is really good. I will let you proceed as you want. Go ahead and tell us how you are doing.

Mr. ELDREDGE. I will be happy to answer any questions you have on your mind.

I want to share with you several items, a different side of the coin perhaps than that represented by Davis and other artists who might seem to document the fine arts aspirations of this Nation. You have read perhaps about a major acquisition, among several we made, late in 1986. This was the Hemphill collection of American folk art, all together nearly 400 objects from what is generally acknowledged as the finest private collection of folk art in American hands today. Now these are part of the National Collection. Selecting two of them was difficult to represent the whole set. For example, we have here a fine view, about 1840. A romantic notion about what the Hudson Valley looked like by an immigrant artist named Thomas Chambers. He is known for these fanciful compositions. It looks more like the Rhine with castles than perhaps the Hudson at Albany. But that is the area in which he painted, representing one traditional type of American folk art, well documented in the Hemphill holdings—Charming scenes and portraits. What truly distinguishes the Hemphill holdings, however, is another aspect of American creativity, less generally recognized, and certainly less generally collected. And this might be called "outsider art," twentieth-century folk art. Some of these items are much too large to bring to the Hill. But here is a walking stick of early twentieth-century origin, probably Afro-American origin. We have a scholar, in fact, in residence at the moment studying Afro-American walking sticks. This object features a wonderful gentleman in distress with a serpent, Masonic emblems, African elephants, and the like. A beautiful piece of sculpture.

Mr. YATES. That is a real artist, is it not?

Mr. ELDREDGE. It really is. We do not know the maker, alas.

Mr. YATES. How come Sylvia did not get it away from you?

Mr. ELDREDGE. Well, this was made in the United States probably not from the African continent.

Mr. YATES. I see.

Mr. ELDREDGE. Certainly this type generically derived from African precedents.

These two represent the tip of the Hemphill iceberg, which will be the subject of a status study and conservation efforts over the coming years before being put on view in major exhibits.

GIFT APPRAISAL

Mr. YATES. Did you have to buy the Hemphill collection?

Mr. ELDREDGE. It came to us as a combination gift and purchase. We did pay trust funds in the amount of \$1.4 million, which represented but a part of the appraised value.

Mr. YATES. What was it appraised for?

Mr. ELDRIDGE. I do not honestly know. It was considerably more than that.

Mr. YATES. It raises, of course, a thing that plagued the Smithsonian in connection with its gems a few years ago, and that is the reason I ask the questions when they come up. Has that problem been taken care of? I should ask the Secretary perhaps. You are aware of the problem?

Mr. ADAMS. I am aware of the gem problem.

Mr. YATES. Yes, and the problem of over-appraisal in order to obtain objects.

Mr. ADAMS. I have very carefully excluded ourselves from the appraisal process. There is none of that that goes on here. I think Mr. Eldredge was properly saying that the donor has to make his own arrangements for that, and we are not part of that process in any way.

That was before I came to the Smithsonian, but my clear impression is we learned our lesson from that and we are not engaged in practices that were objected to then.

Mr. ANDERSON. I think at the same time it would be worth noting, Mr. Chairman, that there are official policy statements out which have sensitized all of our staff that if instances arise where they have reason to suspect that a donor may be inflating his statement of the value of potential donations to the Internal Revenue Service, we are to refrain from acquiring the object in question.

Mr. YATES. I assume that took place in connection with the Sackler Gallery, too. He made a gift there that was so huge, I am sure the question of deductibility was not done in connection with the Smithsonian, but between Mr. Sackler and the IRS.

Mr. ANDERSON. The gift was so large, Mr. Chairman, that I am sure it used up several generations worth of tax write-offs.

Mr. YATES. In Dr. Sackler's case?

Mr. ANDERSON. I would almost certainly think so. Even in his case.

HEMPHILL CATALOGUE

Mr. YATES. Okay, back to American art.

Mr. ELDRIDGE. I have here for your information, a catalogue that was circulated by the Milwaukee Museum several years ago. It offers a small sampling of the Hemphill collection and gives you an idea of the diversity—

Mr. YATES. It looks like my aunt.

Mr. ELDRIDGE. Mr. Chairman, this gives scholars, public, and staff an opportunity to look at both sides of the American art coin, if you will. The fine arts tradition is well documented and has evolved over 150-plus years. But now, in a singular acquisition, the Smithsonian has recognized the equally important and lively folk art traditions that will complement the fine arts. That will be the subject of our study and conservation efforts. There are many problems regarding the preservation of unique items of this sort—whirligigs, metal objects that rust when left out of doors, as they have been in some cases for generations and many other kinds of

objects. We do not even have a standard by which to define art conservation aspirations for this collection yet.

Mr. YATES. How do you decide, using the American folk art, whether this goes to you or to Mr. Kennedy? I am sure Mr. Kennedy has objects like this in his collection—his roosters or his weathervanes. You have roosters and weathervanes, do you not? Are those not examples of American folk art?

Mr. KENNEDY. Yes. We talk to each other.

Mr. ELDREDGE. Yes, we keep in touch. In this case, many of the objects are of twentieth-century origin and were clearly created with artistic intent on the part of the maker, and this aspect seems to separate the Hemphill works from more utilitarian folk art objects, traditionally acquired by American History. It is the esthetic intent in this collection that seems to make it appropriate to our holdings.

Mr. YATES. The esthetic intent.

Mr. ELDREDGE. The esthetic intent of the artist, making a cane so beautifully carved.

Mr. YATES. Yes, I can understand the cane, but I wonder if some of his roosters and his other weathervanes are just as beautiful.

Mr. ELDREDGE. Please understand I am not denigrating Roger's collection.

VANDALISM

Mr. YATES. I do not mean to start a feud here.

Anyway, any vandalism?

Mr. ELDREDGE. Not this year, no, sir.

Mr. YATES. Not this year. Last year?

Mr. ELDREDGE. Not since my time here.

PCB REMOVAL

Mr. YATES. Okay. Any problems in connection with health and safety of your visitors?

Mr. ELDREDGE. Not of our visitors. We do have PCBs still in our system, which I understand are scheduled to be removed.

Mr. YATES. When will you do that, Mr. Siegle?

Mr. SIEGLE. In our PCB program, we have removed three transformers so far. For the ones in AA/PG, the contract is scheduled to go out for bid this summer. That is 1987 money. We got money to do that in the 1987 program. So that was the first contract out on the street. It goes out the end of May for bid, so that it will be completed by the end of calendar year 1987.

The rest of the program is a big chunk of money, funded in 1987, and the rest of it is in our 1988 program. And that will complete our total PCB problem.

NATIONAL SCULPTURE INVENTORY

Mr. YATES. Okay.

Anything else you should tell us by the way of funding that Mr. Jameson, the Secretary, and everybody else is keeping from you?

Mr. ELDREDGE. Not that they are keeping from me. A program significant for research in the field of American sculpture, like walking sticks, was deleted by OMB and this was to be a unique

automated inventory of American sculpture to complement our longtime American paintings inventory. We had developed over the past year, with grant funds from a New York foundation, a pilot program which now enables us to proceed with a five-year National Inventory. But for lack of Federal funds to complement the additional private monies, which have been contributed by that initial—

Mr. YATES. How much money was involved?

Mr. ELDREDGE. It was a request to OMB for \$175,000, which was deleted.

Mr. YATES. Has that gone by the board now?

Mr. ELDREDGE. It is not in the budget presented to you.

Mr. YATES. Right, but is the opportunity still there?

Mr. ELDREDGE. The opportunity is still there. The Luce Foundation in New York has renewed its pledge for the next three years, for a total amount of \$150,000. The Getty Foundation has a request under active consideration, for approximately \$300,000. And I am requesting Smithsonian Trust funds for \$60-75,000. That plus the \$175,000 per annum deleted by OMB, would enable us to carry forward this program to the fullest extent.

Mr. YATES. And that is not in here?

Mr. ELDREDGE. That is not in here.

Mr. YATES. Anything else you want to tell us?

Mr. ELDREDGE. The scaffolding is down from the Renwick Gallery.

Mr. YATES. I thought it was up there forever.

RENWICK EXHIBITIONS

Mr. ELDREDGE. And new exhibitions are up of American crafts. I hope you will be able to take them in.

Mr. YATES. What American crafts are on exhibition?

Mr. ELDREDGE. We have a show of historic quilts by the Indiana Amish. An exhibition of the newly developed permanent collection of American crafts, twentieth-century crafts. And in April we will do a major show of American Art Deco.

Mr. YATES. American Art Deco.

Mr. ELDREDGE. American Art Deco, yes.

Mr. YATES. Was that as good as the French and the Belgian?

Mr. ELDREDGE. Pardon?

Mr. YATES. Was it as good as the French and Belgian?

Mr. ELDREDGE. It was made in America.

INSECT ZOO

Mr. YATES. Okay. Thank you very much for that exhibit.

All right. Now we have the Natural History Museum.

Mr. Hoffmann. Mr. Hoffmann, I had some grandchildren visiting me and they have told that they have to see your bugs.

Mr. HOFFMANN. The live ones?

Mr. YATES. Do you have live ones?

Mr. HOFFMANN. Yes, we do.

Mr. YATES. I know you have drawers full of dead ones. I did not know they were that spectacular that one came all the way from Chicago to see your bugs.

Mr. HOFFMANN. The insects are one of our most popular exhibits.

Mr. YATES. Really. Are these butterflies?

Mr. HOFFMANN. A variety of things, butterflies, beetles, termites, cockroaches.

Mr. YATES. I do not have to go there for that.

Mr. HOFFMANN. You have in the materials that were distributed two items from the Natural History Museum. The first was written by Stan Shetler, the Associate Director of the Museum.

Mr. YATES. The Portraits of Nature?

Mr. HOFFMANN. Portraits of Nature. This is an exhibit that is currently on display. There has been also a poster from Portraits of Nature.

Mr. YATES. And I take it this book on the Indians is yours too?

Mr. HOFFMANN. That comes from the SI press, I believe. It is not a production of Natural History.

Mr. YATES. What is the other one?

Mr. HOFFMANN. The poster.

Mr. YATES. Did that book come from you?

Mr. HOFFMANN. No, it was not done by people in Natural History.

AMERICAN INDIAN HALLS

Mr. YATES. The big complaint I have had is how poorly you show off the American Indian.

Mr. HOFFMANN. I agree fully.

Mr. YATES. What are you going to do about it?

Mr. HOFFMANN. I want to reinstall those halls as part of a reinstallation of approximately 75 percent of the exhibit halls over the next 20 years or so.

Mr. YATES. So you wanted \$3.5 million to do it right? How much do you need for that purpose?

Mr. HOFFMANN. For the Indian Halls, we estimate an average of about \$4 million per hall.

Mr. YATES. How many are there?

Mr. HOFFMANN. There are three major halls: the Physical Anthropology Hall, which includes a lot of Indian materials; the North American Hall; the Middle American Hall; and, finally, the South American Hall.

Mr. YATES. Now, the ones I have seen—I do not know if it is your shop or perhaps there are other museums—were pretty dull. They were dioramas, very dull. Is this what you want to do again?

Mr. HOFFMANN. No.

Mr. YATES. How do you want to change this? Do you know yet how you want to change it?

Mr. HOFFMANN. I cannot give you specifics. We have, however, a Hall Committee that has been meeting and they are developing concepts which we wish to display in the halls.

Mr. YATES. The shows that you see in other museums are really spectacular in the way exhibits are presented and hung. Can you do that with your shop?

Mr. HOFFMANN. Yes. Most of our exhibits, however, are 30 years old, 25 years old. They are old exhibits. We need a fourth generation of exhibits in Natural History. And we have proposed a long-

term project for renovating exhibits that will be coordinated with the major building renovation, the heating, air conditioning renovation. There is no point in tearing out the old building system and putting it back in and then having to come in and put in the exhibition. If we can do this in a coordinated fashion, we can save a lot of time and a lot of disruption, and then also save a lot of money. So we proposed a coordinated program.

Mr. YATES. So you need \$12 million for that purpose?

Mr. HOFFMANN. No, that is just the first few halls.

In the budget, there is nothing for permanent exhibits. We had in there the amount of \$295,000, which would begin the process for the first hall. That was taken out of the budget. So there is nothing in the 1988 budget for the completion of a hall.

HEYE COLLECTION

Mr. YATES. Is that because Smithsonian may be getting the Heye collection?

Mr. HOFFMANN. No, this has nothing to do with that.

Mr. YATES. Suppose you got it, what would you do with it? You would have to refashion it.

Mr. HOFFMANN. We would have to rethink the whole ball game. That is another issue entirely, and that is one I would defer to the Secretary.

Mr. YATES. Where are we on that? Is this something we ought to put on the record or does it make any difference?

Mr. ADAMS. I think it could be on the record. I see no reason not to.

Mr. YATES. All right.

Mr. ADAMS. Let me make clear that the Heye Foundation collection is under the control and the ownership of a private board. And the private Board has taken the position that it hopes to have Congress approve a measure that will presently come to the Congress to transfer the ownership of the old Customs House in New York. I do not know what the Congress will do about that, but that is the course of action they currently are very earnestly hoping will go through.

It requires other actions as well. I think their anticipation of being able to make that move at all requires also substantial subvention from the City of New York, which has not been assured, for their operating budget.

And then, in addition, I have been told that something on the order of \$30 million would be necessary in order to convert the building from being a bankruptcy court, which is what GSA has been developing it for, into a museum.

All of those represent considerable hurdles, and I do not know what the outcome will be.

If they fail to be able to go forward for any of a variety of reasons, I think that collection is unique in all the world. I think it is a national collection of national importance. And I would certainly do everything that I could to try to persuade the Board to take seriously the possibility of allowing it to come to Washington. Whether that is a serious possibility, I do not know. The Board has not directly addressed this yet, to my knowledge. I have spoken with in-

dividuals on the Board. I think there are possibilities, if that collection were to come to Washington, of doing extraordinary things with it—things the Smithsonian is uniquely equipped to do. I think, for example, that because of its nature, it could and should help to bring knowledge of their history and their cultural achievements back to American Indians by being worked on by American Indian historians and archivists, by traveling to museums on reservations, by circulating to all of the cities of this country in a way that our Traveling Exhibits are equipped to do.

I think one might see a kind of cultural florescence take place around the existence of that as a national collection if it were here. I do not know whether this is a reasonable possibility. There are enormous problems, obviously, before that could happen. But it seems to me the proposition is worth seriously pursuing. And, if ever we have the opportunity to take it up with that Board, I would certainly want to go and press such a case.

Mr. YATES. Have you never taken it up with the Board?

Mr. ADAMS. I have raised it with the Board indirectly. I have raised it with the Chairman of the Board and asked for an opportunity to meet on it, and at some point there may be such an opportunity. But, at the moment, I think their position is that they want to see what action is taken by the Congress on the proposal to give them the Customs House.

Mr. YATES. We do not have, for the record, a description of the Heye Collection. It is a spectacular collection, is it not?

Mr. ADAMS. I think it is a fabulous collection. I think it is a collection of the kind that you could never create again, you would never dream of creating again. And its strengths complement that of the Smithsonian in that a good portion of our collections is archeological in character. The great strength of the Heye Foundation Collection is ethnographic; it contains some of the greatest surviving objects that American Indians produced in the nineteenth century. It is really quite extraordinary.

Mr. YATES. There is a good argument to be made that there ought to be a National Museum for the American Indian, and that ought to be the base for it.

Mr. ADAMS. Well, I would hope that someone listens to that argument someday. I may have gone further than I should, Mr. Chairman.

Mr. YATES. You and I have talked about this.

Mr. ADAMS. Let me emphasize the collection is owned. The Board is responsible for its maintenance, for its well being, and for its proper utilization. And they have reached a position that I have to respect, that the way they could best suit the purpose of the founder is to locate it in the Customs House in New York. I would not want to undermine that. I would like to press the case that the collection is of such quality that there is even a finer use for it. But I certainly would not want to undermine having the best thing possible happen to that collection, whether that be the Customs House or the Smithsonian as an alternative.

Mr. YATES. Is there enough for both a museum here and also for a satellite museum in New York?

Mr. ADAMS. I would expect that if it did come here we would certainly want not only to satisfy the interest and concern for the col-

lection in New York, but to meet the concern of the founder who, after all, was a New Yorker, to have a major satellite in New York. It seems to me the possibility of locating a major satellite in midtown Manhattan, something on the order of the IBM museum, might very well enormously increase visitation in New York itself. But all of that is speculation at this point.

HOUSING THE HEYE COLLECTION

Mr. YATES. If the museum were to come to Washington, do you think it would be possible to have a special building created as the Hirshhorn was for the Hirshhorn collection, as Sackler was for the Sackler collection, Freer for the Freer collection? Could such a building be built for the Heye collection, do you think?

Mr. ADAMS. I think it could be built. I do not want to identify the individual, but prior to the end of 1986, I was in contact with an individual who was prepared to make a major donation toward the cost of such a building, had we had the collection, which we did not.

Mr. YATES. Where would you put it?

Mr. ADAMS. There is only one space left on the Mall next to the Air and Space Museum. It seems to me that the combination of a museum of American Indians on that spot, close to the Air and Space Museum and the National Gallery, would create a museum cluster of extraordinary importance. A suggestion to that effect will be presently coming forward, I am told, from the Quincentenary Commission, which just finished a meeting on its own report. I have not seen their language. I do not know what they will say, but my understanding is that their deliberations have led them to a similar conclusion.

Mr. YATES. So everything depends upon what the Congress does at the present time?

Mr. ADAMS. Well, I think there are many decision points. Certainly the critical ones are here in the Congress.

There are questions of fundraising that will confront that Board, and there are questions of the attitude of the City of New York that I think have yet to be resolved. There are critical questions, I think, here in Congress.

Mr. YATES. Well, is it in order for the drafting of a proposal, such as you have just outlined, to be presented to the Board? It certainly ought to be presented to the Committees of Congress that are examining this question now.

Mr. ADAMS. I am not certain, Mr. Chairman, whether a proposal to transfer title has been formally introduced at this point. I simply do not know. If it has been, at least it has not come to hearing. If it comes to hearing, I would assume that the matter will involve witnesses and testimony. I have met with the Senate Select Committee on Indian Affairs and I know they have an interest in this area. I rather assume there would be an opportunity to hear testimony on alternatives, but I do not know, of course.

Mr. YATES. I will talk to Mr. Udall. I think it is before his Committee and I will see what he suggests.

All right, let us get back. Should we not hold up your \$12 million for your displays until you know what is going to happen to the Heye collection?

Mr. ADAMS. Since I do not know what is intended for this prospective new museum, I cannot tell you that.

Mr. YATES. I think you have answered that.

Mr. ANDERSON. There is an argument that could be made, Mr. Chairman, that American Indians are appropriate in a number of settings within the Smithsonian. One could make a case for the presence of Native American art in the Museum of American Art, if Charlie will forgive me for saying so, or in Mr. Kennedy's museum or Dr. Hoffmann's museum, as well, perhaps, as a museum solely dedicated to the Heye Foundation collection. One need not, I think, "centralize and only centralize."

Mr. ADAMS. We also have to say, Mr. Chairman, that we are currently meeting with delegations of American Indians with regard to the quality and contents of the exhibits that now exist in Mr. Hoffmann's museum. And I share his view that they are outdated and, in some respects, seriously defective. And I doubt that we could afford, frankly, in terms of our own standards and issues of human rights that I think are genuinely involved there, simply to set this matter aside for such time as it may well take.

ARCTIC ARCHEOLOGY AND BIOLOGY

Mr. YATES. Well, tell us what you wanted from OMB, and OMB did not give you.

Mr. HOFFMANN. First, I might just show you what we brought along. This represents an old Bering Sea harpoon head and counter weight, and is representative of a new initiative that we are pursuing in Arctic archaeology and biology. We had requested \$446,000 for that. We were fortunate to have \$200,000 remain in the budget. This is our first priority for research, and I want to emphasize its great importance to the Natural History Museum as a new research initiative.

It also represents the area that we hope to do our next major exhibition in, after the Bateman show. This would open in the fall of 1988, and is titled "Crossroads of Continents."

It would bring into this country for the first time the remarkable collection of North American Indian artifacts ranging from the Bering Sea down through Old Russian America. These are in the museum in Leningrad and have never been seen outside of that country.

We would pair this with material from our collections and from the American Museum. Ironically enough, we have better Eastern Siberian collections in some respects than they do. So we hope to make this a major new exhibition.

ISLAND ECOSYSTEMS STUDY

As far as other requests, we are very anxious to get additional funds to expand a program on the study of island ecosystems. Our people have been discovering remarkable things concerning the historical extinction of many kinds of organisms on islands. And we believe that this will tell us a great deal about the process of

extinction and, perhaps, give us insight into the way in which we can attempt to deal with the onrushing threat of massive extinction in other parts of the world.

NATIVE AMERICAN PROGRAM

Just picking out a few things, another item that we were very anxious to get additional support for was our Native American Program. And this, too, was removed from the budget. We are continuing with this by reprogramming it based upon a much reduced level. We, fortunately, have been able to hire an American Indian as curator of this program. And this is now going forward.

Finally, we are faced with a very serious problem in replacing inadequate, defective collection storage equipment in many areas of the museum, but most notably in the Botany Department and in Entomology. We have cases that are simply not adequate to preserve the collection safely. And we are planning an ongoing continuous battle with pests that may damage our collection. Those are a few of the things.

Mr. YATES. You ought to have some mutations.

Mr. HOFFMANN. Well, generally speaking, mutations are even worse news. Those are some of the highlights of things that we would like to do and are presently unable to do.

AMERICAN INDIAN HALLS

Mr. YATES. I do not remember whether your justification contained a statement of what you wanted that OMB would not let you have for refurbishing the Halls for the Indians.

Mr. HOFFMANN. I thought we had covered that. We have requested this amount of money for permanent exhibitions.

Mr. YATES. You have not told us what you want to do, really.

Mr. HOFFMANN. What we would like to do——

Mr. YATES. What your plans are. I guess it is a plot at this point.

Mr. HOFFMANN. That is right, and they are plots concerning two of the Halls. One is the present Hall of Physical Anthropology. We would replace this lot in kind. The principal objections there are the display of human remains in the exhibit.

Mr. YATES. Are you not going to give those back to the Indians?

Mr. HOFFMANN. We are constantly discussing with appropriate Indian groups the nature of this material and, in fact, we are in the process of returning some material to the Blackfeet at this time.

Mr. YATES. Well, good. Should you not do it for all of them? Have not all of the tribes asked for it?

Mr. HOFFMANN. No, they have not. We have been forthcoming in dealing with whoever has come to us and so far relatively few tribes have either addressed letters to us or sent people to Washington to work with us. But each time that that has happened, we have met with those people.

Mr. YATES. I thought Suzan Harjo was on your trail.

Mr. HOFFMANN. That represents a different kind of pressure, a sort of Pan Indian pressure.

Mr. YATES. Staff tells me that Senator Inouye is contemplating filing a bill that would require you to return all of the bones.

Mr. HOFFMANN. I have read a draft of that bill and, yes, it would require us to return again materials that we could identify. There would be a long process of documenting and identifying the materials and we would return it. There are other additional features of the bill as well.

Mr. ANDERSON. But still only if the tribes in question requested the material. We would not be forced to return skeletal materials if the tribes did not want them.

Mr. ADAMS. I have been working closely with Senator Melcher's staff on that. He and Senator Inouye are working together on the amendment. I think the intent is not as sweeping as we were initially led to believe. I think there is room for us to work constructively on a bill.

Mr. YATES. Is there an amendment we ought to add to our bill to do this?

Mr. ADAMS. I believe it is now the intent of the Senate Select Committee to include a provision for additional funding in their own bill. Perhaps you need to be in touch with them, the Select Committee on Indian Affairs.

It might be worthwhile to be in touch with Senator Inouye or Senator Melcher. They are including authorization language in their bill.

Mr. YATES. Did we finish the plots?

Mr. HOFFMANN. No, we never got to them, thank God.

Mr. YATES. Well, go ahead with the plot.

Mr. HOFFMANN. We are replacing the existing critical Anthropology Hall with the Hall of Human Origins. That will have a totally different approach and would trace human origins from their earliest beginnings on up through the diversification of human kind in the last few thousand years.

The American Indian Hall will also be replaced and, instead of the present Hall, which, in effect, freezes Indians in time—it presents them as stereotypes of our view of the Indians—we would trace the origin of Indian cultures through time, from the very first colonization of North America, anywhere from 50,000 to 15,000 years ago, depending upon who one believes, on up through the present and show the dynamic nature of the cultures, how they have changed through time, how they have adapted to different kinds of environments, including attempting to bringing them up to the present day. After all, these are not dead cultures. They are living and deserve to be treated as living, dynamic cultures.

A BUILDING FOR AMERICAN INDIAN COLLECTIONS

Mr. YATES. Is your collection extensive enough so that, with what you have and perhaps what Mr. Kennedy has and Mr. Eldredge has, you could house a building on the Mall now without the Heye collection?

Mr. HOFFMANN. That is a good question. We certainly have a very extensive collection, there is no question of that.

Mr. YATES. Suppose you wanted to go ahead with the building in honor of the American Indian on the Mall. How much can you put in there? Is it good enough for such a building?

Mr. ADAMS. That is the next question. I simply do not know, Mr. Chairman.

Mr. YATES. Who would know that?

Mr. HOFFMANN. I think I can say that the collections are, in fact, extensive enough.

Mr. YATES. I do not mean extensive enough, are they good enough? Is that the same thing as saying good enough? I suppose the words have different meanings.

Mr. HOFFMANN. Yes. I think you need to consider not only an appropriateness of coverage, but also the quality of the object.

Mr. YATES. The reason I raised it, of course, is because I think the Committee should express a desire of recognizing the importance of the American Indian to the Nation. And the Smithsonian is going forward with Oriental art. I think it might be well for the Smithsonian to go forward with another institution dedicated to the American Indian.

Mr. HOFFMANN. Mr. Chairman, do you have the wherewithal to do that?

Mr. ADAMS. Let me suggest that it would not be appropriate to consolidate all of our collections in a separate building for this purpose. I am thinking particularly of an exhibit that recently opened in American History, titled "After the Revolution." One of the things emphasized there, importantly, as Roger Kennedy has already touched on, is we are looking at the diversity of the American historical experience, and to pull Indians out of that context would be damaging.

Mr. YATES. I amend my question. Do you have enough material to go into a new building on the Mall, of the kind that you propose for the American Indian, from the present holdings and possibly from other collections?

Mr. ADAMS. We certainly have enough material. Whether we have enough material of the right quality, I am not in a position to say, Mr. Chairman.

Mr. YATES. Who can tell you that?

Mr. HOFFMANN. I think we would have to go back to our Department of Anthropology and pose the question to them. That is something we have never previously considered.

Mr. YATES. Why do you not take a look at it? Maybe that might be of interest for the Heye people.

Mr. ADAMS. That is a good point.

Mr. YATES. All right. Let us come back at 1:30.

AFTERNOON SESSION

MUSEUM OF NATURAL HISTORY EXHIBITIONS

Mr. YATES. Had you finished, Dr. Hoffmann?

Mr. HOFFMANN. There are more things that I could discuss with you. We had been talking about the American Indian halls and their renovation.

Mr. YATES. There are more things, Horatio, than you find in your school books.

Mr. HOFFMANN. I guess I would like to emphasize that I don't think the problems we have with the American Indian halls should

be taken from context. We have a much larger problem there and, while this is our highest priority, it is one that has to be developed in the broader context of what we want our exhibits to look like thirty years from now, twenty-five years from now.

Mr. YATES. Okay. Have you had any vandalism?

Mr. HOFFMANN. No.

Mr. YATES. Do you have any visitors? [Laughter.]

Mr. HOFFMANN. We have lots of visitors. I might say that the present temporary exhibit, the Bateman exhibit, has drawn nearly a hundred thousand visitors since it opened in mid-January.

Mr. YATES. Which is the Bateman exhibit?

Mr. HOFFMANN. This is the Portraits of Nature.

Mr. YATES. Oh, that's a beauty.

Mr. HOFFMANN. And it's a very, very heavily visited exhibition. Overall, in fact, for the museum, visitation is up 37 percent over the same time last year and, I think, in large part because so many people are coming to see this exhibition.

HEALTH, SAFETY AND SECURITY

Mr. YATES. That's good. I'll have to go see it myself, then.

No vandalism. Anything jeopardizing the health of your visitors—drinking water, guards? [Laughter.]

Mr. HOFFMANN. We have two problems that do not directly impact on visitor health, but they are potential threats. One is the PCB problem, which is being dealt with.

Mr. YATES. Mr. Siegle is taking care of you on that?

Mr. HOFFMANN. Yes. And the other is asbestos abatement, since we have a major asbestos problem in the attic. Scientific visitors have to deal with this, but the general public does not.

Mr. YATES. They wear masks?

Mr. HOFFMANN. Yes. We have not had any thefts. We have had the recovery of one object that disappeared in 1975 due to the persistent pursuit of this by the FBI. This is an Indian pipe, a stone pipe, that was returned.

Mr. YATES. How did they find it?

Mr. HOFFMANN. Well, we suspected a particular individual of having taken it, and we finally were able to—not we, but the FBI was able to—

Mr. YATES. It took twelve years to get it back.

Mr. HOFFMANN. It took a long time.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

Mr. YATES. Okay, thank you very much, Doctor; you will see me over at your shop.

Let's see, we still have Hirshhorn. Mr. Demetrion, wherever you are.

Have you bought your Beuys yet?

Mr. DEMETRION. No, not yet.

Mr. YATES. Are you going to buy your Beuys?

Mr. DEMETRION. We'll acquire one at some point, Mr. Chairman.

Mr. YATES. Do you want to spell "Beuys" for the reporter?

Mr. DEMETRION. B-e-u-y-s.

Mr. YATES. And you still want one?

Mr. DEMETRION. At least one.

Mr. YATES. At least one.

Mr. DEMETRION. At least one.

Mr. YATES. How goes the Hirshhorn? Are you getting all the acquisitions you need?

Mr. DEMETRION. No, we are not. That's always a major concern, and I think the question that you asked Alan Fern this morning is an appropriate one in that I think maybe there's a tendency, certainly on my part, and presumably on Alan's part, if what he said this morning is correct, to be a bit modest in our requests. We had requested an additional \$50,000 for fiscal 1988, which we were not able to get. The Hirshhorn at one time had had as much, I believe, as \$318,000 for acquisitions; it's down to \$150,000 at this time. These are Federal appropriations I'm speaking of.

Mr. YATES. That will buy you a postage stamp, won't it?

Mr. DEMETRION. Just about.

HIRSHHORN DEACCESSIONS

Mr. YATES. Well, are there any you lost as a result of this? You are selling things, aren't you?

Mr. DEMETRION. I beg your pardon?

Mr. YATES. You are deaccessioning.

Mr. DEMETRION. We are deaccessioning works of art, and——

Mr. YATES. Are you getting any money for that?

Mr. DEMETRION. Yes, we are.

Mr. YATES. How much money have you gotten so far?

Mr. DEMETRION. In total we will have accumulated approximately five and a half million dollars.

Mr. YATES. Really.

Mr. DEMETRION. Yes.

Mr. YATES. What have you gotten rid of?

Mr. DEMETRION. We've gotten rid of one object, a Henry Moore duplicate cast—Mr. Hirshhorn, fortunately for us, bought two of them, two of the six which existed. We sold one of those and cleared \$900,000 on it. There was a duplicate Matisse cast for which we received \$360,000, a Picasso at \$180,000—these are all duplicates. There must have been approximately a dozen duplicate sculptures.

Then we've also sold a number of works which we felt were either not of museum quality or redundant in the collection.

Mr. YATES. What was the nature of the work you sold?

Mr. DEMETRION. Paintings——

Mr. YATES. I mean by whom.

Mr. DEMETRION. There were several works by Arshile Gorky, for example, who certainly is a big name in American art.

Mr. YATES. He sure is. I'm surprised you got rid of a Gorky.

Mr. DEMETRION. Well, it had to do with quality. Mr. Hirshhorn's bequest included two paintings by Gorky, one of which is, I believe, the finest Gorky that we now own. We still own over twenty paintings——

Mr. YATES. Of Gorky's?

Mr. DEMETRION. Yes, paintings and drawings by the artist. As you know, Mr. Hirshhorn collected in depth. Sometimes perhaps——

it's not appropriate to say excessive depth—but when you have over 400 objects by an artist, sometimes that might be considered excessive.

Mr. YATES. Is this Evergood you're talking about?

Mr. DEMETRION. No, it's Abraham Walkowitz, as a matter of fact.

Mr. YATES. You have a lot of Evergoods, as I remember.

Mr. DEMETRION. We have a lot of Evergoods, not nearly that many, though. But there are fourteen artists who are represented by at least one hundred objects in the collection.

Mr. YATES. What do you do in order to deaccession? Do you personally make recommendations to your Board?

Mr. DEMETRION. Yes. The way——

Mr. YATES. And does the Board then have to get the approval of the Board of Regents to do this?

Mr. DEMETRION. No, it does not. The way we've been doing it is that I meet periodically—generally once a month—with the curatorial staff. Certain artists are selected to be reviewed. We bring all of their works together. And then I make the recommendation to the Board when it meets twice each year, and the Board has the final decision on whether or not we should proceed.

Mr. YATES. Have they turned down any of your deaccessioning requests?

Mr. DEMETRION. Yes, they have.

Mr. YATES. Can you give me an example?

Mr. DEMETRION. They turned down two sculptures by Henry Moore that I recall; there may have been something else, but that's what comes to mind.

Mr. YATES. These were not duplicates.

Mr. DEMETRION. These were not duplicates, that's correct.

Mr. YATES. You just didn't think the Moores were of the highest quality?

Mr. DEMETRION. Yes, exactly.

Mr. YATES. How can you tell?

Mr. DEMETRION. Well, it becomes certainly subjective. But this is a case where the input of the curators is important. We also have to think very, very seriously, especially when it comes to three-dimensional objects, some of which are quite large—the Moores, I might add, were not—that space requirements also become a problem. However, I will tell you that we are not deaccessioning anything because of space requirements—that is not a criterion.

Mr. YATES. Are there any other objects to be deaccessioned?

Mr. DEMETRION. There will be, I think, over the next several years.

Mr. YATES. The Walkowitzes?

Mr. DEMETRION. I'm sure that we'll take a look at the Walkowitzes, and——

Mr. YATES. The Evergoods.

Mr. DEMETRION. We've been only deaccessioning works by—excuse me, we have not been deaccessioning works by living American artists, unless we have the permission of those artists to do so. In a couple of instances we had duplicate casts again, but still asked for permission from the artist to dispose of them.

Mr. YATES. Are you the only gallery in the Smithsonian that's deaccessioning?

Mr. DEMETRION. No, we are not.

Mr. YATES. Who else is?

Mr. ADAMS. American Art, for example.

NATIONAL MUSEUM OF AMERICAN ART DEACCESSIONS

Mr. YATES. What did you deaccession, Mr. Eldredge? I forgot to ask you that question.

Mr. ELDREDGE. Largely, Mr. Chairman, European works.

Mr. YATES. Oh, I see. You want to make yours purely American, then. How much money did you get?

Mr. ELDREDGE. In the neighborhood of a half million, \$700,000; something in that neighborhood.

Mr. YATES. What do you do with that money? Do you turn it back to the Smithsonian? [Laughter.]

Mr. ELDREDGE. We do not turn it back to the Smithsonian, but rather back into other art works by American artists appropriate to the collection.

Mr. YATES. That's your acquisition fund, then? That becomes part of your acquisition fund.

Mr. ELDREDGE. Yes.

Mr. YATES. Well, then, you're not poor in terms of acquisitions, are you?

Mr. ELDREDGE. I didn't say that, sir.

Mr. YATES. With half a million bucks, that's a lot more than Mr. Demetrian's got—I think.

Mr. DEMETRION. No, it isn't.

[Laughter.]

HIRSHHORN ACQUISITION FUNDS

Mr. YATES. Now, how have you been able to restrain the claws of Mr. Jameson and Mr. Adams from taking that money for other purposes?

Mr. DEMETRION. They are very kind and generous people. [Laughter.]

In part. [Laughter.]

But also Mr. Hirshhorn's agreement with the Smithsonian stated that the funds received from any works which were disposed of were to go back into an acquisition fund for the museum.

Mr. YATES. Okay, so you're protected.

Mr. DEMETRION. The fund at this moment has approximately \$5,600,000 in it, as we speak.

Mr. YATES. Is that going to be used to buy a Beuys?

Mr. DEMETRION. What we have been doing is we've been setting aside approximately 10 percent of the amount of money that we have available in that fund each October 1st, so that the fund will not be depleted and, hopefully, if the Treasurer is able to maintain wonderful growth with our funds, we will be able to have that fund for a very long period of time. To answer your question directly, at some point I will recommend a Beuys to the Board again.

VANDALISM AT HIRSHHORN

Mr. YATES. Do you have any vandalism?

Mr. DEMETRION. We've not had any vandalism this year.

Mr. YATES. This year.

Mr. DEMETRION. This year.

Mr. YATES. Did you last year?

Mr. DEMETRION. Not last year, but the first year I was here, about the first four months, we had an exhibition in which there was considerable vandalism—it seemed to run in cycles and then all of a sudden it ceased.

Mr. YATES. What was the exhibition?

Mr. DEMETRION. It was the “Content” exhibition which celebrated the tenth anniversary of the museum opening. It was opened in the fall of 1984 and was up for about three or four months.

Mr. YATES. Was it purposeful vandalism?

Mr. DEMETRION. We’re not aware that it was, no.

Mr. YATES. Has it all been corrected?

Mr. DEMETRION. Yes.

HIRSHHORN INTERIOR WALLS

Mr. YATES. What about the problems of your walls? You were sweating there for awhile and the walls were a problem, weren’t they?

Mr. DEMETRION. Well, we had some water damage in the storage area where we kept our works on paper, and we were deeply concerned about that. That problem appears to have been taken care of—I say appears to have been, because it no longer exists now, but one never knows. It didn’t exist before it started, so we’d like to think that’s well under control.

Mr. YATES. Do you know where the water came from?

Mr. DEMETRION. Yes.

Mr. YATES. Through the wall?

Mr. DEMETRION. It came actually through breakage in the pipe, I believe.

Mr. YATES. But you used to have——

Mr. DEMETRION. Condensation.

Mr. YATES. No, not on the inside, but on the outside, I thought.

Mr. DEMETRION. Oh, we still have that.

Mr. YATES. You still have that. That doesn’t affect it, though? There was some fear that it would.

Mr. DEMETRION. Well, there’s some concern even now, and I see that Mr. Siegle has put us in for a significant sum of money.

Mr. YATES. For that purpose?

Mr. DEMETRION. Yes. When I say “put us in,” it’s something in long-range planning that it needs to be taken care of. We still have that problem.

HIRSHHORN SECURITY

Mr. YATES. Got enough guards?

Mr. DEMETRION. No, we’ve had a serious guard problem over the past several months. I will say that during the past two months that problem has abated considerably, but from about August to December we had a number of shortages because of the reasons that were stated earlier. We are about five guards short at the moment.

Mr. YATES. Does the budget take care of that?

Mr. DEMETRION. Well, it's not a case of budget, as I understand it; it's a case of being able to hire guards. And I think the entire Smithsonian is—

Mr. YATES. Guard short?

Mr. ADAMS. The problem is, as I understand it, Mr. Chairman, that you have to hire people who have veterans preference, and there simply isn't a supply that is adequate to our needs.

Mr. YATES. Well, can you hire them if you have tried to find guards with veterans preference?

Mr. ADAMS. Mr. Jameson?

Mr. JAMESON. No.

Mr. YATES. No what?

Mr. JAMESON. No, you can't.

Mr. YATES. You can't hire anybody who isn't a veteran?

Mr. JAMESON. You have to hire veterans, yes.

Mr. YATES. What if there are no veterans available?

Mr. JAMESON. Then you are just short of guards.

Mr. YATES. Well, that doesn't make sense, does it?

Mr. JAMESON. I don't think it makes sense either.

Mr. YATES. I can understand veterans organizations demanding a veterans preference, but if there are none that apply—and you go out and recruit for that?

Mr. JAMESON. Heavily recruit, yes.

Mr. YATES. We'll have to try to change that; I'll have to talk to Mr. Montgomery about that.

Mr. ADAMS. That would be very helpful; it really would.

Mr. YATES. How many guards short are you?

Mr. ANDERSON. Eighty.

Mr. YATES. Eighty?

Mr. ADAMS. Yes.

Mr. YATES. That's a lot of guards.

Mr. ANDERSON. We've had to close halls during the middle of the day; we've had to close certain doors to the buildings. It's been a major disruption.

BUDGET REQUEST FOR HIRSHHORN

Mr. YATES. All right, I'll take it up with Mr. Montgomery.

What else should I ask you that I haven't? Do you have enough money to operate your shop?

Mr. DEMETRION. Yes, we seem to have enough money to operate the shop. However, we have encountered one major problem since we received Mr. Hirshhorn's bequest last year. We acquired an additional fifty-eight—almost fifty-nine hundred objects when that bequest came to us. And, as a consequence, we had to find storage areas for these objects. What we've done is to close off three of our exhibition galleries, galleries which would normally be open to the public to view works of art—we've closed those off and are storing the objects there so that they can be properly catalogued, photographed, etcetera.

We had requested \$200,000 last year to process all of that. We received only \$45,000.

HIRSHHORN COLLECTIONS INVENTORY

Mr. YATES. What do you mean by "to process" it?

Mr. DEMETRION. Well, hiring personnel on a temporary basis to help with the cataloging of this, because this is in addition to what we normally do. We almost doubled the size of the collection overnight.

Mr. YATES. Are you fully inventoried now?

Mr. DEMETRION. We are not fully inventoried now, no.

Mr. YATES. Because of the lack of funds?

Mr. DEMETRION. Yes, because of lack of personnel.

Mr. YATES. Mr. Adams, I had the impression your inventory was almost completed, or had been completed.

Mr. ADAMS. Inventory is one of those elastic terms that is subject to redefinition each year, it seems to me.

Mr. YATES. I should ask you the question, what is the situation with respect to the inventory?

Mr. ADAMS. Well, it's a question that probably ought to be directed to each of the museum directors.

Mr. YATES. You're short.

Mr. DEMETRION. That's our problem, the——

Mr. YATES. You're inventoried except for the new acquisitions?

Mr. DEMETRION. Except for the bequest, exactly, and a large part of that has been inventoried. When I say inventoried, we have a listing of all of the objects that are supposed to be there. We've had that since 1981, shortly after Mr. Hirshhorn died. But we've had to check off that list against what is actually there, and we found that in some instances there are a lot more works than we thought were on that original list, because they've been put in portfolios.

Mr. YATES. That's a bonus. Mr. Eldredge, are you inventoried?

Mr. ELDREDGE. Yes, we are, sir. The problem that's been alluded to, of swallowing large collections, delays the full cataloging, but the core collection is fully inventoried.

Mr. YATES. Well, are there some that aren't inventoried?

Mr. ELDREDGE. Those, like the Hemphill folk art material, that have just been acquired are in the process of being inventoried.

Mr. YATES. They are in the process now. Alan, what about yours?

Mr. FERN. We are all inventoried.

Mr. YATES. All inventoried. What does that term mean, "all inventoried?" They are listed somewhere, but does that mean that somebody can push a computer button and that's it?

Mr. ADAMS. Well, the problem is that the vagueness of the term is particularly clear if you were to talk to the owners of the major collections in natural history or American history, where the initial inventory is at the level of boxes which may contain a number of objects. And the question of what constitutes a proper inventory moves at one end toward becoming, in fact, a catalogue record, and at the other end sort of a very sketchy listing indeed. And the problem is that you can be along that continuum in different positions.

And in the case of the collections with by far the largest number of objects, you probably will find that we are somewhere in the middle of that continuum rather than at the end.

Mr. YATES. That's the Natural History with your bugs, then?

Mr. ADAMS. Yes.

Mr. YATES. Is that for lack of funds, or why?

Mr. ADAMS. Well, I doubt that——

Mr. YATES. I thought the inventory process was going right along.

Mr. ADAMS. I think it is going right along. But I don't think we will ever be in a position to say the inventory is now finished; I think you will always have a——

Mr. YATES. Because you obviously get new collections, and you obviously get deterioration and deaccessions.

Mr. ADAMS. Yes.

Mr. YATES. Isn't there something we ought to complete as quickly as possible? Do you know what you have?

Mr. ADAMS. I think, with a certain amount of caution, we can say we know what we have. But the point is that I'm not sure that we can move ahead at a much more rapid pace without interfering with the good management of the institution in some senses. You can't have everything be a crash program without—I mean, if you put people on this task, are you delaying in the task of the renovation of the major exhibits. Many of these people are working interchangeably on a variety of different activities. And obviously you want to move ahead, but I don't know that one wants to give one's self a deadline and try to bring it to completion.

Mr. YATES. I thought when Sam Hughes was there that we had established a deadline, didn't we, in multi-year phasing of the process?

Mr. ANDERSON. Not only was it established, it was met. And if Sam were here, he would reiterate that.

Mr. YATES. I think he told us that it was met.

Mr. ANDERSON. Yes, indeed.

Mr. YATES. Now Mr. Adams is telling us it's unmet?

Mr. ANDERSON. There are diminishing returns, Mr. Chairman, to going through the boxes of pottery shards, for example, and recording each one as a separate inventory record. There may well be sufficient information about that box simply by labeling it as one inventory record, one box of pottery shards.

Mr. YATES. Okay, that's all that I'm asking for. But is the box on your——

Mr. ANDERSON. Yes, indeed.

Mr. ADAMS. Oh, yes, at that level we have it inventoried.

Mr. YATES. The box is there.

Mr. ADAMS. Yes.

Mr. YATES. A box containing a blank number of shards? What do you say? What do you put on your inventory chart?

Mr. ANDERSON. Help.

COLLECTIONS INVENTORY AT AMERICAN HISTORY

Mr. YATES. Mr. Kennedy, what do you put on your boxes?

Mr. KENNEDY. Mr. Chairman, as the Secretary said, there are differing views inside the Institution as to what is an adequate description of what's in a box or a file or a case. I think many of us feel that we are short of where we ought to be, even getting close to a rule of reason, as to what kind of level of specificity we ought to have on those boxes. We feel that what you did when you gave

us the sums of money that Sam Hughes asked you for was to discover that after 90 years, in which very poor record-keeping had been the rule and in which a whole bulk of major collections had come into the Institution, we got at least a handle on the degree to which we knew what we had. That's true; we are pretty clear as to what we have, in many cases, in general terms, and in some bureaux, the smaller ones, in specific terms.

But the fact is, the kind of money we are asking you for for 1988 is about the amount of money that will keep us in steady state with where we now are, but it will not close the gap between where we ought to be and where we now are with regard to being able to make use of these objects for our educational purposes. I think we all feel we are short of that. And the question becomes how many additional bodies, that is, man-years, and how many additional dollars are needed to get us closer to a better condition. There is no right number, there is no precise number, that can say at the end of this number of work-years and this number of dollars we will be in apple-pie condition. All we can say to you for sure is that we are not losing control of the condition that we arrived at as a result of all the previous allocations.

But we have gotten the job, in my book—and this is just one director's view—we are sort of 85 percent of the way to getting to an appropriate condition for a national museum, in our place.

Mr. YATES. How do you know whether you've got what you think you've got, then?

Mr. KENNEDY. You know 85 percent of what you need to know about that. I'm not trying to suggest—

Mr. YATES. That's 85 percent of the most important artifacts?

Mr. KENNEDY. Yes. There's no question that the classes of artifacts within our care are identified and that we are down to a level of specificity, which means that we are not likely to have major holdings that we don't know about.

What is true is that, in order for us to make use or for other institutions that want to borrow from us to make use of these objects, we are short of the degree of precision that we ought to have to be a genuinely well-equipped national museum.

Mr. YATES. How do you know whether you are missing a coin from a coin collection?

Mr. KENNEDY. We do not know—in some cases, with coins, of which, as you know, we have, as I recall, 300,000, or with stamps where we have fourteen million, we couldn't tell you about an individual instance in those enormous categories. We could tell you where all of our Byzantine coins of a particular decade would be, but we couldn't tell you, I suspect, where each of those coins were—though I may be corrected by my coin expert.

We are not quite there, in our view.

Mr. YATES. When will you be there?

Mr. KENNEDY. Well, the numbers that I have before me suggest that it will even take us another twenty-two years at the current rate of proposed increases to get there; therefore we'd like to escalate the rate some—we'd like more work-years and we'd like more money. That's a management judgment; it's tough to know how much money you throw, as Mr. Anderson said, at a problem to get you toward a greater level of confidence.

SUGAR BOWL

Mr. YATES. Are you still missing your sugar bowl?

Mr. KENNEDY. I don't remember a sugar bowl, Mr. Chairman.

Mr. YATES. Well, sure, there was a sugar bowl that was taken, a silver sugar bowl. I think that was taken some years ago and Charlie Blitzer reported on that. How do you know that these aren't—

Mr. KENNEDY. Mr. Chairman, you've got me. I was not here, I think, when that sugar bowl worked its way out of the collection.

Mr. YATES. Do you remember that, David?

Mr. CHALLINOR. I remember, but that wasn't in Natural History. [Laughter.]

I would have remembered whether we got it back.

Mr. KENNEDY. If it were a sugar bowl, we'd know about it. But if it were a collection of advertising pieces of the 1870's related to, let us say, the biscuit business, we wouldn't know which piece out of a possible 5,000 such pieces was or wasn't missing.

Mr. YATES. So, you want to move up from 22 years to 11 years.

Mr. KENNEDY. Yes, we would.

Mr. YATES. Well, maybe we can last for 11 years; I don't know that we can for 22. But that needs a lot more money, then, doesn't it?

Mr. ADAMS. It would need more money.

MUSEUM OF NATURAL HISTORY GEM COLLECTION

Mr. YATES. What about gems? Are those under control? Dr. Hoffmann, that's your shop.

Mr. HOFFMANN. Yes.

Mr. YATES. Do you know if you have all your gems in your possession?

Mr. HOFFMANN. We keep a very close eye on the gems.

Mr. YATES. You have the Hope diamond under good control?

Mr. HOFFMANN. Last time I looked.

Mr. YATES. When was that?

Mr. HOFFMANN. Oh, a couple of months ago. [Laughter.]

Mr. YATES. Have you seen the movie "Topkapi"?

Mr. HOFFMANN. Yes, I have.

MUSEUM OF NATURAL HISTORY COLLECTIONS

Mr. YATES. It didn't disturb you. Go ahead.

Mr. HOFFMANN. I haven't counted, since we in Natural History have the largest collections—we have approximately a hundred million specimens and objects.

Mr. YATES. A hundred million only in your museum? I thought that was the whole Smithsonian.

Mr. HOFFMANN. There are some interesting problems here. You see, we are adding specimens at such a rate—last year we added nearly 900,000 specimens.

Mr. YATES. That you didn't have before?

Mr. HOFFMANN. Our collections tend to overleap the official records of the Institution. We have, by far, the largest number for the Institution as a whole.

We do know in general terms what those objects are and where they are. We have, of that hundred million, three and a half—

Mr. YATES. What those objects are and where they are, do you know whether they are——

Mr. HOFFMANN. Whether they are lots of bugs or whether they are lots of minerals or whether they are Asian masks, or whatever they are, we know that, even though we may not have an inventory record on the computer that specifically tells us about that particular object. We do have three and a half million computer records. In the anthropology collection, for example, we have two and a half million, roughly, objects, and of those, about half a million are on the computer as individual computer records. The other records are either accessioned, they are on the computer as lot records of various sorts. In some cases, records are not yet on our computer data base, but we have the written files that indicate to us what the objects are and where they are.

Mr. YATES. Is that adequate for your purposes?

Mr. HOFFMANN. No, it's not; we have a long way to go.

Mr. YATES. What do your scholars do who are looking for a particular object that is one of your myriad objects?

Mr. HOFFMANN. The first thing to do is to query our computer data base.

Mr. YATES. And you won't find it there, will you?

Mr. HOFFMANN. You will find what we may have there. And then the next thing to do is to go to our written records.

Mr. YATES. You still have card files for those that are not inventoried?

Mr. HOFFMANN. That's right, so it's possible, once you have searched the computer record, to search the card files, the catalogues. This is obviously a much longer process, but it is possible to find and locate an object this way. This is not simply visitors, it's our own scientists.

Ideally, of course, all of these records would be on our computer data. But in order to do that we need more inventory funds, and these funds have been pruned back.

HIRSHHORN INVENTORY

Mr. YATES. A question of priorities, yes. Okay, thank you, Dr. Hoffman.

Well, let's go back to Mr. Demetrian again. Yours should be easy; you don't have little——

Mr. DEMETRION. It's relatively easy compared to the larger museums.

Mr. YATES. You should be through with your inventory in a matter of, what, a couple of months?

Mr. DEMETRION. In about a year and half, I'd guess—a careful kind of inventory.

Mr. YATES. Do you have any problems we ought to know about where we can help you?

Mr. DEMETRION. Well, I would like to make the observation that even going through the bequest and cataloguing it properly is not going to solve the problem of where we store. As I've mentioned, we've had to close off three of our galleries in order to accommodate that bequest, and it is not a very good situation to have to close off exhibit galleries in order to store works.

CONDITION OF SCULPTURE

Mr. YATES. What's the state of your outdoor sculpture exhibits? Is the weather and whatever is in the air eroding your sculptures?

Mr. DEMETRION. It does to some extent. We do have a sculpture conservator on our staff whose sole responsibility is to care for all of the sculptures, not just those outdoors. Each year we hire a temporary person during the summer to help him clean these sculptures, which are outdoors, to take care of them—to wax them.

Mr. YATES. Is there pitting taking place?

Mr. DEMETRION. There's some pitting, but I think because of the fortunate fact that we do have someone taking care of all this all the time, we are in a fairly decent position at this point. I think it'll get worse as—

Mr. YATES. Does the possibility of deterioration also affect your indoor sculpture?

Mr. DEMETRION. To a lesser extent.

Mr. YATES. Is this true of yours, Mr. Eldredge, in American art, your sculptures?

Mr. ELDRIDGE. Yes, we have some outdoors in our courtyard subject to the same conditions that Jim described, particularly—

Mr. YATES. Does waxing help them?

Mr. ELDRIDGE. Waxing does help some, a certain type.

Mr. DEMETRION. With the bronzes.

Mr. ELDRIDGE. Materials of an organic nature are particularly difficult to maintain.

Mr. YATES. Is that true of yours, too, Alan?

Mr. FERN. What we've been doing is worrying especially about plaster, when we have plaster sculpture. We are keeping them under plexiglas and that seems to work. One of our conservators is becoming increasingly expert in sculpture. In some cases, it's partly a matter of inherent vice, I think; it's not just that there are environmental conditions that wear things down, but that certain materials will give out eventually.

Mr. YATES. Anything we haven't talked about? Do you have enough staff?

Mr. DEMETRION. The staff is in pretty good shape all in all; I think our main concern at the moment is proper guards, the proper number of guards.

Mr. YATES. Good, thank you very much.

Mr. DEMETRION. Thank you.

DULLES FACILITY

Mr. YATES. Let's see, Air and Space, the most popular one. Mr. Tyler, come up and tell us about your shop. You have more visitors than anybody else. Do you have any problems at the Air and Space Museum?

Mr. TYLER. We have a number of problems.

Mr. YATES. Other than the objects out at Dulles.

Mr. TYLER. For which we are going to spend \$438,000 to put a temporary shelter over. Could I show you one object from the collection first?

VOYAGER

Mr. YATES. Sure.

Mr. TYLER. We couldn't bring the entire airplane in, but we have brought one of the two winglets on the Voyager, which, as you know, has just broken the last great aviation record flying nonstop, non-refueled around the world.

Mr. YATES. Where are you going to put the Voyager?

Mr. TYLER. It will go in the Independence Avenue lobby, a very, very choice spot, and in fact the only place that we can reasonably accommodate the 110-foot wingspan of the airplane. It's the last remaining spot in a very full museum.

Mr. YATES. Well, that should be an eyecatching—

Mr. TYLER. May I show it to you? It rubbed off as the plane was taking off on the runway.

Mr. YATES. Oh, my goodness, feel that wingtip. Isn't that amazing?

Mr. TYLER. It fluttered to the ground, it was picked up by a lady in her backyard—and the Rutans gave it to us as a first installment on their gift of the Voyager in September. They will first take it to the Paris air show this summer and then fly it back in a C-5 cargo plane, and in September we will have a grand opening and unveiling which we hope you'll come and see.

Mr. YATES. What are these?

Mr. TYLER. This is the composition of the whole aircraft—graphite fibers and a paper honeycomb impregnated with a phenolic resin, and this is what it comes out like, these layers. And it's very, very light, but it's equally as strong as steel, at one-fifth the weight. And this whole weighs 1.1 pounds.

Mr. YATES. Does that mean future airplanes will be made like that?

Mr. TYLER. The Rutans believe so for cargo planes that don't need great speed—for slow-flying cargo planes, yes.

Mr. YATES. The planes that need great speed, this isn't strong enough for them?

Mr. TYLER. Not for the whole construction. Certain planes right now, including Boeing, are using these on air liners right now, certain composite materials of graphite and honeycomb are presently being used by commercial aviation.

Mr. YATES. They are using a lot of composites in our fighter aircraft, as well.

Mr. TYLER. Yes, absolutely, a great deal; they are super-efficient, strong, lightweight, give extended range.

Mr. YATES. That's fascinating; I don't know how they were able to keep a plane up. Did they go through storms?

Mr. TYLER. Yes, they had to rise above the storms by turning on both the motors. The rear motor, 110-horsepower liquid-cooled, ran all the time; when they needed extra energy to get above the storms, they would turn on the front motor, 130-horsepower air-cooled, and rise above it. But that consumed a lot of fuel, so they would have preferred to fly around the storms. So that was their technique. And that was one reason also for going a great-circle equatorial route from west to east, to get into the trade winds and relatively calm weather.

Mr. YATES. Can that break up in a storm?

Mr. TYLER. It didn't, thank God. And it did set this one last great aviation record, which we are very proud to have been associated with.

At one time, the Rutans wanted to have their command center right in the lobby of the Air and Space Museum, but the operation got to be so complex we couldn't accommodate it because of the space and the electronic signals. They transferred it to the Mojave Desert.

Mr. YATES. Oh, that's too bad.

Mr. TYLER. But do come and see it in September, please.

NASM VISITORS

Mr. YATES. I will. Are you still getting your hundreds of millions of visitors?

Mr. TYLER. We have 110 million visitors to date, and, of course, 1986 was a disappointment to us in that the visitor count was down to 7.6 million—I emphasize visitor count. The previous counts have been 9 million in 1985, 14.4 million in 1984, and 10.6 million in 1983. The average has been 9.6 million over the ten years of the museum, a very substantial number indeed—the world's most popular museum.

But we are concerned this past year with 7.3 million.

NASM SECURITY

Mr. YATES. Any vandalism?

Mr. TYLER. None whatsoever.

Mr. YATES. Any thefts?

Mr. TYLER. None.

Mr. YATES. Isn't that wonderful. And what about your guards, do you have enough guards?

Mr. TYLER. A very minimal number, and, of course, we will be stretched thin with the summer hours this coming summer to 9:00.

NASM FILMS

Mr. YATES. And are your movies still as good as they used to be?

Mr. TYLER. I regret to say that "The Dream Is Alive" is an extremely tough act to follow; that was a spectacular movie.

Mr. YATES. Yes, it was.

Mr. TYLER. It grabbed people in 1985. Our next movie, "On the Wing," I think is superlative also.

Mr. YATES. Made by the same company?

Mr. TYLER. No, "On the Wing" joined us through Sam Johnson of Johnson Wax, the co-sponsor, a 77/23 percent split of the cost—Johnson Wax 77 percent, NASA some 23 percent.

Mr. YATES. And there's the Canadian company that made the film.

Mr. TYLER. Oh, the IMAX Theater is our producer for the film. It's the same company.

Mr. YATES. There isn't any other producer, is there, of this type of film?

Mr. TYLER. I beg your pardon, I was thinking in terms of sponsors. Lockheed sponsored "The Dream Is Alive," Johnson Wax

sponsored "On the Wing," which compares natural and artificial flight. I think it's magnificent, but it isn't quite so grabby as "The Dream Is Alive," and I think it has affected our attendance in 1986. That's one of probably four factors that decreased our attendance, the others being the closure of the parking lot, the lack of summer hours last year, and the not quite-so-popular film.

NASM CONDITION OF COLLECTIONS

Mr. YATES. Are any of your objects deteriorating?

Mr. TYLER. The objects inside the museum are in very, very good shape.

Mr. YATES. How do you know whether any of the things that are up in the sky are deteriorating, I mean up in your upper reaches? How often do you inspect them?

Mr. TYLER. Every week.

Mr. YATES. Do you?

Mr. TYLER. We have a cherrypicker crane that goes up and inspects them and dusts them, otherwise they get cobwebby very, very rapidly.

Mr. YATES. Really.

Mr. TYLER. Yes, once a week in the very early morning hours.

NASM CARPET

Mr. YATES. That's a process, isn't it.

Mr. TYLER. Yes, it is. It also has a detrimental effect on our carpeting, though. If you've been to the museum recently, you will realize that one of the eyesores in the museum is a dirty, shoddy carpeting; it is worn and frayed and patched, and coming apart. It is really quite unpleasant to look at, and it's getting to be a safety hazard also.

Mr. YATES. Where is this?

Mr. TYLER. Throughout a good portion of the museum. We have made a special effort this year, with a great deal of invested funds from building operations that were reprogrammed, to put new carpeting in from the Milestones of Flight main gallery on the first floor down towards the Space Hall, towards the Capitol. We've redone one-third of the ground floor of the building. We have not yet done the main lobby area or the first floor down towards the Castle; we have done most of the main floors on the second floor. We still are desperately in need of \$120,000 of additional carpeting. That was one of the requests that we made to the Castle, which was trimmed down to a \$40,000 allowance to go to OMB, which was zeroed out—

Mr. YATES. It's hazardous to the public?

Mr. TYLER. I believe it is getting to be a hazard to the public; it is a concern to us—people do trip and fall.

Mr. YATES. And Mr. Adams won't give you the money?

Mr. ADAMS. We wanted to give NASM the money for patching the worst holes, and the OMB took that away.

Mr. TYLER. Yes.

Mr. YATES. How much money do you need?

Mr. TYLER. Realistically we need to replace the carpets routinely on a five-year cycle. There are 200,000 square feet of carpeting in

the public areas; the carpeting costs \$12 to \$13 per square foot. That 120,000 square feet translates to 22,000 square yards, which is, over a five-year cycle, \$50,000 a year for the carpeting. We would need an additional one work-year at \$22,000 for two part-time people to install that carpet. Total cost over a five-year cycle would be \$360,000, sir, to do the carpeting in that museum the way it should be done. The carpeting is now going to a third generation; the carpet lasts about five years. The museum is ten years old. We started replacing carpet about five years ago; the carpet we used a second time around wasn't quite as good as the original carpet. We are now reprogramming \$88,000 of Federal funds in 1987 to buy the first batch of high-quality third-generation carpet just to finish off the first year.

Mr. YATES. Have you considered the possibility of using linoleum or rubber in place of the carpet?

Mr. TYLER. Yes, sir, we have, and truly, Mr. Yates, beginning next week, we have two trials going down. We have found two companies who have volunteered to give us tile, Dura Tile being one company, the name of the other one I forget—to give us 2,000 square feet each as a donation. One will go in front of the theater, Langley Theater, one of the most trafficked areas—and that will be a six-month trial. We are putting the other company's tile down at the west end of the building where most of our big gear comes in, these cherrypicker cranes that go up and clean all of our artifacts. There will be a really good trial of two different types of tile. The tile costs twice as much as carpeting; it's \$2.50 per square foot.

Mr. YATES. I thought it would be cheaper.

Mr. TYLER. No—well, in the long run it would be. Obviously we don't want to do the whole first floor in tile; it would be a little unseemly, it wouldn't be quite so acoustically nice or as pleasant. But if we could put a combination of carpet and tile down, we would solve the problem and we could do it in a routine five-year replacement cycle.

Mr. YATES. Should we wait until the tests are completed before we give you the money?

Mr. TYLER. Not for the carpeting, no, sir. [Laughter.]

We could use the carpeting right now, believe me.

Mr. LOWERY. Mr. Chairman.

Mr. YATES. Mr. Lowery?

Mr. LOWERY. You said \$12 or \$14. You mean a square yard as opposed to a square foot?

Mr. TYLER. Our carpeting is costing between \$13 and \$14 per square yard, yes—that's uninstalled. Unfortunately, installation that we contract out costs between \$10 and \$15 per square yard.

Mr. LOWERY. In addition?

Mr. TYLER. In addition. But we can do it ourselves with one work-year, \$22,000, two half-time people, in the wee hours of the evening and the wee hours of the morning before the museum opens up. That would solve our problem. And we would have simple replacement and good carpeting, and not the present eyesore.

Mr. YATES. Very impressive.

Mr. TYLER. Could I have the money, please? [Laughter.]

NASM ROOF

Mr. YATES. What other problems do you have besides carpeting?

Mr. TYLER. Richard Siegle can tell you our continuing problems with the water leaking from the roof, both from the hard roof over the portion of the building that doesn't have the skylights, and the skylights. The skylights have leaked since the beginning of the building ten years ago.

Mr. YATES. Poor design?

Mr. TYLER. Yes, I would say. Richard Siegle can answer that far better than I.

Mr. YATES. Did you ever ask the architects about that?

Mr. SIEGLE. Yes, and we went back to the manufacturer, too, and the best that they can do would be to strike a deal where the manufacturer would pay part of the repair cost, and then we would pay the remainder.

Mr. YATES. Just the repair cost. But is the design so bad that it will continue to happen?

Mr. SIEGLE. We feel that in the long run the skylight framing and some of the rubber gasketing is going to have to be replaced. The fix that is proposed now will probably last five years. But in the long run there's going to have to be some new gasketing and possibly a reconfiguration of the ceiling.

The roof of that building, maybe half of it, is skylight, and then the rest of it is a traditional type of roof. We have money in the expanded request for 1988 for an interim skylight repair of \$250,000.

Mr. YATES. Are you going to stop his leaks with that?

Mr. SIEGLE. That's what that's for. We are currently funding a study for coming up with a cost estimate for a long-term fix that we would program them out over five years. And then there is some roof repair, standard roof type repair also.

NASM MUSEUM SHOPS

Mr. YATES. What else should you and I talk about? What else do you need besides carpeting and roofs?

Mr. TYLER. Well, I haven't discussed some of the more mundane, indeed pedestrian, affairs in the museum we have real needs for. There are others that are—

Mr. YATES. Your store is doing very well, your shops are very popular.

Mr. TYLER. Yes, they are; we just remodeled them and they are opening today. They are remodeled, an expanded version, much nicer—

Mr. YATES. Are you as large as Mr. Kennedy's museum?

Mr. TYLER. Larger, I believe, Roger.

Ms. LEVEN. No. They are comparable.

Mr. YATES. I'm surprised you don't make it larger. I'm surprised the Smithsonian doesn't enlarge all its stores.

Ms. LEVEN. It's larger; it's larger in square footage than before. But, in order to make it larger, there were two choices. One was to go to the basement, which people don't like to do—there are no exhibitions down there. The other was to build a mezzanine which required considerable structural work. When we priced it out, the ad-

ditional sales that we would generate versus the cost of putting in a mezzanine and the steel that was needed to do that it didn't make any sense.

NASM RESTAURANT

Mr. YATES. Is it cheaper to get a new restaurant or put in a new shop?

Ms. LEVEN. They are probably about the same, depending on—

Mr. YATES. Which is more profitable?

Ms. LEVEN. The shops.

Mr. YATES. I would think so.

Ms. LEVEN. Public service in the restaurant is the key question, and why we are doing that.

Mr. YATES. You really want me to believe that? [Laughter.]

Mr. ANDERSON. If you had done, Mr. Chairman, what I did last week—I spent five minutes standing in line to take the elevator up to the third floor cafeteria. Once I got there it took me about five minutes to get food off the carousel that sends hamburgers and french fries and malted milks in front of you, and then, unfortunately—I mentioned this to Jim Tyler, it probably isn't nice to comment on things like this in public—but then I went from the carousel area to the seating area, and my shoes stuck to the floor.

Mr. YATES. Is that where the carpets are going? [Laughter.]

Ms. LEVEN. That's our contractor's problem and not Mr. Tyler's.

Mr. ANDERSON. But it is a discouraging experience right now to try to eat at our most popular museum, and that should not be the case.

Mr. YATES. Why don't you make a shop out of it? [Laughter.]

Mr. TYLER. Mr. Yates, whatever you do with that space, there is one great need of the museum behind the scenes, which is to improve our research productivity. Our research enterprise is weak. And we are beginning to strengthen it by reprogramming some resources, particularly in the line of scholarly research. The space that will be vacated from the third floor cafeteria will be converted into office space for new scholars in history and in science. That is one of our most outstanding needs. Space, like all the other bureaus in the Mall, is critically important.

Mr. YATES. Okay, anything else you should tell me?

Mr. TYLER. No, thank you. I just do hope that you will come to the September opening.

Mr. YATES. We will; we promise. Maybe we can get you some carpeting.

Mr. TYLER. Thank you.

CENTER FOR ASIAN ART

Mr. YATES. All right, now we have the new Quad. And we have Mr. Lawton? Where are you, Mr. Lawton? Oh, there you are, Tom. How are things in your shop?

Mr. LAWTON. Very well, sir.

Mr. YATES. Are you on the edge of welcoming Dr. Sackler's place?

Mr. LAWTON. We are; we will open on schedule. Dr. Sackler pays regular visits to see how things are coming, and he is always pleased.

Mr. YATES. Do you have any problems at the Freer now that you have all the conservators you need?

Mr. LAWTON. You and your colleagues have been very generous to us, both in terms of the Sackler and in terms of the Freer.

Mr. YATES. And no problems at all? You had a leaking roof, as I remember.

Mr. LAWTON. Well, Mr. Siegle takes very good care of our roof, we don't have a problem.

Mr. YATES. No water damage?

Mr. LAWTON. No water damage.

Mr. YATES. Do you have any vandalism?

Mr. LAWTON. No, sir.

SECURITY

Mr. YATES. No thefts?

Mr. LAWTON. Yes.

Mr. YATES. Really?

Mr. LAWTON. We did, for the first time in the history of the gallery, we had a theft.

Mr. YATES. What did they swipe?

Mr. LAWTON. Small objects, Japanese objects.

Mr. YATES. Metal?

Mr. LAWTON. Lacquer, made of lacquer.

Mr. YATES. Black lacquer?

Mr. LAWTON. Yes.

Mr. YATES. Are you still looking for them?

Mr. LAWTON. We are still looking for them.

Mr. YATES. How valuable are they?

Mr. LAWTON. I'm supposed to defer to the security people in the Smithsonian about that. I'd be glad to tell you in private session.

Mr. YATES. Why is that necessary?

Mr. LAWTON. I don't know, sir; that's what I was told.

Mr. ANDERSON. The case is actively being pursued by the FBI, and we try to accede——

Mr. YATES. Well, this isn't insured.

Mr. ANDERSON. I beg your pardon?

Mr. YATES. It isn't insured, and it isn't a question of the amount being disclosed for that reason.

Mr. ANDERSON. No, no.

Mr. YATES. Do you have all the guards you need?

Mr. LAWTON. No, I think like most Smithsonian museums, we don't have every day all the guards we would need, but the Smithsonian makes every effort to assign guards to us, and they are always with us; they don't change very often, so they get to know us, they get to know the museum and the collection. I think that's very good.

Mr. YATES. Well, it sounds like everything is going along beautifully.

Mr. LAWTON. Well, if I could raise one—not to be left out with everyone else. [Laughter.]

SACKLER GALLERY COLLECTION

Mr. YATES. All right, why should you be left out?

Mr. LAWTON. In the case of the Sackler Gallery, if we could have some Federal funding for acquisitions. We don't have any. We have asked over the last few years, and either—

Mr. YATES. You don't have the same deaccessioning privileges your colleagues have, do you?

Mr. LAWTON. We don't, no, sir. But the Sackler Gallery is named after Dr. Sackler, and it's less likely that other people initially are going to be giving us monies to buy objects for the collection.

Mr. YATES. Has he set up an endowment for acquisitions?

Mr. LAWTON. No, sir, he hasn't.

Mr. YATES. Can we get him to?

Mr. LAWTON. He's thinking about it. We've had discussions about it, but it hasn't happened yet.

Mr. YATES. Shall we send him a copy of this transcript?

Mr. LAWTON. That would be a good idea.

Mr. YATES. Just by way of a general hint. [Laughter.]

Mr. LAWTON. Yes, it's a hint. At the same time, if you could consider perhaps \$100,000 in the budget for the Sackler collection.

Mr. YATES. How much does it cost you to buy a piece for the Sackler Gallery that's worthy of its quality?

Mr. LAWTON. Depends on the category, with ceramic, lacquer.

Mr. YATES. Are there any available?

Mr. LAWTON. Yes; oh, indeed, yes.

Mr. YATES. Where, in Japan or here?

Mr. LAWTON. In the United States, in Europe, in Japan, any number of places.

Mr. YATES. What are we talking about?

Mr. LAWTON. We would be looking at those areas of the collection—for instance, Korean objects; Dr. Sackler gave us none; he gave us two Japanese objects. And we would like to strengthen those areas of the collection. And we would like to emphasize the contemporary aspects of those cultures, which are not represented in the Freer Gallery.

Mr. YATES. Do you get acquisition money?

Mr. LAWTON. In the Freer we get acquisition funding, but not in the Sackler.

Mr. YATES. Why do you not in the Sackler? Do your colleagues not allow you to have that as part of the pool?

Mr. LAWTON. I think just in the last few years cuts have had to be made and it happened that the cuts were made in relation to the Sackler's acquisition fund.

Mr. ANDERSON. In this instance, Mr. Chairman, I think Dr. Lawton is referring to the Federal budget rather than the trust fund budget.

Mr. LAWTON. That's true. I didn't mean to imply we weren't getting some funding on the trust side as do other Smithsonian museums.

Mr. YATES. Well, what would \$100,000 buy for you?

Mr. LAWTON. It would buy us several contemporary Japanese prints, for instance, which we would like to add to the collection.

Mr. ADAMS. Mr. Chairman, if I may insert something here. I've been in discussion with Dr. Sackler, who is concerned at a larger level about the problem of what he terms "national treasures" which he sees drifting away from this country on a scale that entirely surpasses the matter of the Sackler Gallery, particularly as a result of the devaluation of the dollar. And I think he's sufficiently concerned about this that he may be in touch with you directly. I think he has the feeling that some national program perhaps ought to be considered in this area.

Mr. YATES. Well, I've been considering drafting legislation which would establish a program of national treasures comparable to the Japanese, to the British, and to the French. But, our country is so vast as compared to them and there's so much that you wonder whether or not you could have a program of this kind.

But I don't know why not. Of course, the Japanese not only have national treasures in artifacts, they have it for persons.

Mr. ADAMS. Living artists, yes.

Mr. YATES. Living artists—and I think that would be fine, too, to single out people who deserve recognition of that kind.

Mr. Lowery?

Mr. LOWERY. Do we have gifts from national governments, such as the Korean government or the Japanese government in these areas? Have we made requests? I thought it might help with the negative trade deficit.

Mr. YATES. The State Department asked certain governments for money for the contras; maybe we can get them to ask for gifts to the Smithsonian.

Mr. LOWERY. A Boland Amendment for artists.

Mr. LAWTON. We could ask for them, but I think most countries wouldn't be willing to give up their prime art objects, and that's what we would like; we would like a very fine example of the particular type.

ACQUISITION PROGRAM

Mr. YATES. Well, you won't be able to buy those anyway if you had acquisition money.

Mr. LAWTON. They do come on the market from time to time, really first-rate objects.

Mr. YATES. Really?

Mr. LAWTON. First-rate objects are still available. I think if they were in the particular museum of a country, they probably wouldn't be willing to give them to another nation.

Mr. LOWERY. Have we made requests? Do we have an active program?

Mr. LAWTON. I can't speak for the whole Smithsonian.

Mr. ADAMS. In the case of Japan, I was there just two weeks ago. These are not the kinds of requests to make baldly on the spot, but we are exploring many different forms of cultural and scientific relations with the Japanese, and indicating that we thoroughly lack for collections here that are representative of their great cultural achievements. And it wouldn't surprise me if at some point over what I hope is a rich and continuing relationship something materialized, but it isn't going to do so immediately.

Mr. LOWERY. Well, it strikes me that we are not going to be in a stronger position than we are now in terms of dealing with some specific countries. I mean, the Koreans were just here for a trade mission, for instance, buying \$2 billion worth of American goods, and I think their governments are very sensitive to some of the outstanding political issues that we have, and are looking for as much good will in the country as possible. I would think through artistic gifts they would be receptive to that kind of approach.

Mr. ADAMS. I don't claim to be an expert in this, but I have the clear impression that in, particularly, the cultural area one doesn't deal with this as a horse trade in quite the American style.

Mr. YATES. I think maybe we ought to set up a Hall of Nations in the Sackler Gallery with little cases for gifts by the various nations, maybe that would do it, like they did at the Kennedy.

Mr. ADAMS. We had in mind what you are directing your attention to.

Mr. YATES. Maybe you ought to get Dillon back, I mean as your emissary for getting gifts. He used to ask for them.

Mr. ADAMS. Well, we are happy to use anyone. It still is not something that you raise instantly.

Mr. YATES. No, you can't do it very easily.

[Brief discussion off the record.]

HEALTH AND SAFETY

Mr. YATES. Anything else you and I should discuss?

Mr. LAWTON. No, sir.

Mr. YATES. Nothing possibly jeopardizing the health and safety of your visitors?

Mr. LAWTON. No, sir.

Mr. YATES. Okay, thank you very much, Tom.

Mr. LAWTON. Thank you.

AFRICAN ART ACQUISITION PROGRAM

Mr. YATES. African art. Sylvia, where are you? Sylvia, did you see that cane Mr. Eldredge came up with?

Ms. WILLIAMS. No, but my colleagues told me about it, Mr. Chairman. I know the Hemphill collection—I know of it. It does belong in Dr. Eldredge's museum. [Laughter.]

Mr. YATES. Well, that's a concession. What can I ask you? You don't have any guards yet, do you? Oh, you do over on "A" Street, don't you?

Ms. WILLIAMS. We've moved, Mr. Chairman.

Mr. YATES. When do you open?

Ms. WILLIAMS. We open in September, and we are on schedule, and it is quite wonderful. I don't know if you were ever on "A" Street, but the difference is like night and day.

Mr. YATES. I was in "A" Street.

Ms. WILLIAMS. We are now in a museum.

Mr. YATES. I was going to say did you take the "A" train. [Laughter.]

Ms. WILLIAMS. We are in a museum, and it's splendid, it's quite splendid. And we are busy working on our inaugural installations, of which there are five, and we look forward to having you there.

Mr. YATES. Are you going to have enough objects to occupy all the space?

Ms. WILLIAMS. As you know, Mr. Chairman, we have been working for three years trying to strengthen the collection and get it ready for what is about to occur in September. That work is going to have to go on, but we have made progress through the Smithsonian's generous giving of trust funds for us and through the five-year program, acquisition program, through the Smithsonian. Federal funds are modest. As a matter of fact, this year we had hoped to get \$70,000 in Federal funds additional to bring us to a level of \$200,000 for acquisitions.

But, knowing of your interest, I thought you'd like to see a piece that has come in over the last three years, which will be in one of the opening installations that we have acquired. This was acquired from a private Belgian collection.

Mr. YATES. From the Congo?

Ms. WILLIAMS. Yes, the piece is from the Congo; it's from Zaire, central Zaire. And it is a cup. I can pick it up and show it to you.

Mr. YATES. Tell me why you put gloves on?

Ms. WILLIAMS. Because you have things on your hands that are not good for it.

Mr. YATES. You don't want your fingerprints on it.

Ms. WILLIAMS. Exactly.

Mr. YATES. In case it's stolen. [Laughter.]

Ms. WILLIAMS. It is from the Kuba of central Zaire.

Mr. YATES. That's beautiful.

Ms. WILLIAMS. It's a human head with ram's horns. And they were a brilliant kingdom in central Africa.

Mr. YATES. That's beautiful. That was an artist, wasn't it?

Ms. WILLIAMS. The Kuba people are quite extraordinary in the sense that overt proclamation of wealth was something that was admired, and it drove artists to create works of virtuosity and fancy rather than just a straight treatment of a form. So that's what you are seeing there.

Mr. YATES. Now, are all your art objects that good in quality?

Ms. WILLIAMS. That we've worked on for the last three years, yes. We have worked very hard through gift, purchase, and loan—we are bringing in loans, a lot of loans, for the inaugural installations.

Mr. YATES. A lot of loans. How many loans will you have, do you guess?

Ms. WILLIAMS. It's approximately, out of five installations, approximately 200 pieces on loan.

Mr. YATES. How long of a period for a loan?

Ms. WILLIAMS. They vary. In the permanent installation there are only twenty-three long-term loans coming in, and we hope those will stay—they are indefinite loans and will stay for quite some time. In an international loan show, the minute the show goes down, all the pieces are returned to their homes.

SIZE OF INVENTORY

Mr. YATES. What will you have to replace them?

Ms. WILLIAMS. I will have to work with more exhibitions coming in, organized elsewhere and organized by ourselves, bringing more material in.

Mr. YATES. I guess what I'm getting around to is how many objects do you have in your inventory?

Ms. WILLIAMS. Oh, the collection is approximately 5,000 objects, and that has been occurring since the founding of the museum in 1964. But, as I had mentioned to you once before, a great number of those objects are most suitable for study purposes and not for exhibition purposes, because the criterion for the museum is the esthetic quality of the material that is put out on view. And that must be the finest.

Mr. YATES. Yes.

Ms. WILLIAMS. So we will have to rely on exhibitions until the permanent collection reaches the level at which we can cull from it to create exhibitions.

Mr. YATES. Will you be exhibiting any of the art from the south-east?

Ms. WILLIAMS. From where?

Mr. YATES. Oceania.

Ms. WILLIAMS. No, we do not have in our collection Oceanic material. That is handled in the Natural History Museum at present. They have a collection of material.

Mr. YATES. A good one?

Ms. WILLIAMS. I believe Dr. Hoffmann could answer that.

Mr. YATES. Dr. Hoffmann, how good is your collection of Oceania?

Mr. HOFFMANN. I can give you a lay person's opinion, since I'm a mammalogist.

Mr. YATES. Since you're a what?

Mr. HOFFMANN. I'm a mammalogist, a biologist—I study mammals. But my impression is that it's quite good. We have a chairman of the department who is an Oceanist, and over the years we have accumulated a very good collection.

ACQUISITION PROGRAM

Mr. YATES. Sylvia, what else do you want to tell me about.

Ms. WILLIAMS. Well, our budget request is quite straightforward I think this year, Mr. Chairman, and it would be wonderful if we get all that we are asking for.

Mr. YATES. Did you ask for more than you got?

Ms. WILLIAMS. The only thing that was cut from us was acquisitions, \$70,000 for acquisitions.

Mr. YATES. You don't have any money for acquisitions?

Ms. WILLIAMS. Yes, I have—the present base is \$130,000.

Mr. YATES. \$130,000. Is that enough?

Ms. WILLIAMS. No, the \$70,000 would make it much better. [Laughter.]

Mr. YATES. Why would it make it much better? Do you have your eye—

Ms. WILLIAMS. Because African art is going up, Mr. Chairman, in cost.

Mr. YATES. I thought it was going down.

Ms. WILLIAMS. I wish. Not in my lifetime.

Mr. YATES. Well, I knew that pre-Columbian was.

Ms. WILLIAMS. Going down?

Mr. YATES. Yes.

Ms. WILLIAMS. I hadn't been watching that. That's not true for Africa, though. The good material is available, but it is steadily increasing; and, of course, each year that goes by, if it keeps up at the rate it's going, it will be increasingly difficult to acquire material.

Mr. YATES. How many pieces can you buy for \$70,000?

Ms. WILLIAMS. Well, if we get the \$70,000, it would be \$200,000.

Mr. YATES. How many pieces can you buy for \$200,000?

Ms. WILLIAMS. I'm not quick on math, Mr. Chairman, but you can find excellent pieces of African art in the \$30,000 and up category; very fine pieces in the six-figure category.

SECURITY

Mr. YATES. All right, do you have enough guards at your shop?

Ms. WILLIAMS. I am sure that the protection services will have guards in that new building and ready for us. One other thing I should mention, we were cut last year in our exhibition budget, and we are asking for \$69,000 in this year's budget for the transportation of objects for exhibition work. And it is important that we get that back.

MUSEUM OF AFRICAN ART BUDGET REQUEST

Mr. YATES. Okay.

Ms. WILLIAMS. In research, our personnel is coming along very well, thanks to you and this Committee. We have one request in for an assistant curator and one in for a computer specialist. We are novices in the computer age in the Museum of African Art. As you know, we started just recently moving ahead on this. Some day I would like a computer.

But one thing to make it more efficient——

Mr. YATES. Well, talk to Dr. Shapiro. [Laughter.]

Ms. WILLIAMS. Yes, I should. One thing is that we want to assure the efficient use of the material that we are getting slowly, so we would like a computer specialist on our staff to help us with that. So we are rather straightforward this year. We'll be in good shape if we get it.

Mr. YATES. Good luck in your opening.

Ms. WILLIAMS. Thank you.

FUNDRAISING AT COOPER-HEWITT MUSEUM

Mr. YATES. All right, Cooper-Hewitt. Would you like to come forward and tell us how the satellite is? How is Mrs. Taylor?

Mr. PFISTER. Mrs. Taylor is traveling in Europe at the moment; she sends her regrets.

Mr. YATES. Is she all right?

Mr. PFISTER. She is remarkable. She is——

Mr. YATES. I knew that.

Mr. PFISTER. She's in very good spirits and looking forward to working full-time on her health and several interests that have been deferred for several years.

Mr. YATES. Okay, do you want to expand? Can you raise enough private money to expand?

Mr. PFISTER. There is something in the vicinity of \$3.6 million in the bank at the moment. The campaign is not yet publicly announced. There were committees in the process of formation at the time of Mrs. Taylor's decision to leave. Several of those people will continue to be informed as the search for her successor proceeds. And one hopes to see that campaign reinvigorated at the appropriate moment. It's difficult to do without a director in place, obviously.

VANDALISM

Mr. YATES. All right, do you have any vandalism?

Mr. PFISTER. No, we have heavy use; we don't have vandalism to report.

COOPER-HEWITT BUDGET REQUEST

Mr. YATES. How is the condition of your house?

Mr. PFISTER. Heavily used. Last year was an extremely heavy year for us, very popular exhibitions—and that's good in terms of attendance revenue, and it's a good indication of the use the public makes of us.

We are not before you at the moment with a formal request for programmatic increases. We had approval from OMB on a current-services-budget basis for a \$100,000 increase request specifically for facilities, operations, and maintenance-related costs. It's been eight years since there was a Federal request made for increased funds for facilities-operations. We did not get beyond, though—I mean, we made it through OMB, but the funds allowed by OMB were re-prioritized and for that reason we are not at the moment asking for that \$100,000. But should you be interested in the justification that was prepared, we would be glad to provide it for you.

[The information follows:]

COOPER-HEWITT MUSEUM FY 1988 FEDERAL REQUEST

The largest portion of federal funds appropriated for the Cooper-Hewitt Museum has always been used for facilities maintenance and related purposes. The problem is that slowly increasing salary and benefit costs for federal personnel have left less and less other-object funding for essential facilities maintenance and operations expenditures.

In FY 1985, of \$132,000 in federal funds available for non-personnel costs, fully \$90,000 paid for a very limited list of essential building related items such as uniform rental for maintenance personnel, sanitary supplies, trash removal services and light bulbs used throughout the facility. (The balance of \$42,000 was devoted to a portion of our basic collections management expenses for loan-related movement of artworks, off-site storage expenses, etc.)

It has been eight years since Congress was asked to increase federal funding for any building-related expenses at Cooper-Hewitt. In those years our daily attendance, special events, and evening program uses of the Carnegie Mansion have continued to flourish. Inflationary allowances, moreover, have been inadequate to protect us against increased prices set by vendors in New York City with whom we have no bargaining control and to who we have no practical alternatives for lower-cost service (eg: basic trash removal service in FY 1986 cost us 25% more than it did in FY

1985 and in FY 1987 we are experiencing another 13% increase for the same level of service).

Obviously, the federal payroll costs have risen during the same period, with a resultant "squeeze" on other objects funds caught between rising prices, heavy demand, and a shrinking base. The problems have only worsened in FY 1986 and FY 1987.

The Museum has coped, until now, by eliminating service contracts for certain building services (eg: window-washing), charging expenses whenever possible to privately funded projects (eg: for lumber or paint) and deferring much-needed routine maintenance of non-public areas. The result has been an increasingly unacceptable appearance (and condition) of the portions of the property which we present to the public and in environments where the staff must do their work.

Our FY 1988 request for \$100,000 in new funds was to reinstate, upgrade, and initiate new service contracts for cleaning and other essential buildings and grounds maintenance services (\$45,000). It also included reasonable allowance for supplies and materials related to the work of our own maintenance personnel as well as necessary stocks of sanitary supplies and light bulbs (\$45,000), modestly increased use of off-site storage for selected groups of collection materials (\$5,000) and increased expenses of long-distance telephonic communications for which we are responsible (\$5,000). The request was specifically approved by OMB as part of the general funding level request to be allowed on the basis of a current services budget, but it was subsequently deleted in deference to other high-priority projects which OMB did not consider within the current-services formula.

CONDITION OF COOPER-HEWITT FACILITY

Mr. YATES. Okay, we would be interested. What should you tell me about the operation of Cooper-Hewitt that causes you problems, if any? Your roof doesn't leak.

Mr. PFISTER. Well, no, as a matter of fact, I think with the rescheduling of the campaign, or the rescheduling of the announcement and the preparation for the campaign, we are looking forward to a meeting in a few weeks' time with Mr. Siegle to talk about the facilities. As you remember, there are two very separate structures on our property, and for these many years one of those structures has not been subjected to any Federal investment really whatever. And I think in a five-year planning time frame we simply have to look at significant investments in the property that will be coordinated, one hopes, with the ultimate improvements and the capital expansions.

Mr. YATES. Anything else I should know?

Mr. PFISTER. Oh, there is one other item. You have been asking about health and safety items, and it's typical of the kind of problem we face. In that second structure—it's a five-story townhouse structure—there is an elevator which is a source of astonishment to all of us at the moment. It has been inoperative since October. This is a house that contains staff offices as well as collections storage. We have been unable to operate the elevator; we have been told it's a danger to life and limb.

Mr. YATES. Did you tell Mr. Siegle?

Mr. PFISTER. Absolutely. We are trying to find the \$200,000 for repairs somewhere in R&R funds before too much longer. But, as you can imagine, trying to work in a five-story structure, in fact with one member of the staff who had polio as a youngster, it's extremely difficult. So that's a current problem.

Mr. YATES. All right, thank you very much.

Mr. PFISTER. You're welcome.

ANACOSTIA NEIGHBORHOOD MUSEUM

Mr. YATES. Anacostia. Hi, Mr. Kinard.

Mr. KINARD. Hello, Mr. Chairman, how are you?

Mr. YATES. You don't have any problems, do you?

Mr. KINARD. I was anticipating that you may ask this. [Laughter.]

Mr. YATES. I wonder where he got the idea.

Mr. KINARD. Let me talk to you about good news, how about that?

Mr. YATES. I think that would be fine.

Mr. KINARD. On May 17, we hope to open our new facility that we have constructed at Anacostia. On the 15th we are going to have a breakfast and we are hoping that you will come to visit us.

Mr. YATES. On the 15th of May you'll have a breakfast?

Mr. KINARD. Yes, and we hope that you will come to that. You are going to be invited.

Mr. YATES. Well, let's hope that I'm here and that I can be; and if I can, I will.

Mr. KINARD. I appreciate that.

Mr. YATES. The 15th of May; I don't know if we'll be through hearings by then.

Mr. KINARD. It would be early in the morning.

Mr. YATES. Okay. [Laughter.]

BUDGET REQUEST FOR NEW ANACOSTIA FACILITY

Tell me about your shop. You're moving in, then. Is there anything I should know or the Committee should know about your needs for funds especially?

Mr. KINARD. Well, I would only say this, that we built this building for the short run really. In the long run we were going to build another building, much more spacious and accommodating to our needs. Unfortunately, because of the compression of funds in the institution, the planning funds were withdrawn. Planning funds for the 1988 budget were \$100,000, and for 1989, \$250,000. We were planning to build a new facility at the stop of the Metro in Anacostia.

So if there is something that you ought to know that you probably didn't know, well, that's it. We are at point zero with regard to that project. And if, in fact, you could do something about that, it would be much appreciated.

Mr. YATES. Why don't you give us an addition to the budget so we know what you're talking about?

Mr. KINARD. Well, I will have to rely upon the cooperation of my colleagues to do that because it's an institutional situation.

Mr. YATES. All right. Is Mr. Jameson likely to cooperate with you?

Mr. KINARD. Yes, sir, very much so. [Laughter.]

I would say otherwise that, as far as our role in the institution is concerned, you heard great discussions here about the Ellington collection, and we don't toot our own horns, but—

BLACK ARTIST COLLECTIONS AT SMITHSONIAN

Mr. YATES. You should.

Mr. KINARD. Sure, I think so, too. But that collection was made possible to come to the Institution through our efforts and discussions with Mercer Ellington. That's one thing that has opened up an enormous opportunity for the Institution to go into the business of collecting of jazz material. There's a large amount of material out there that covers the history and culture of the black American that could be collected, but it falls into that problem of us not having enough space in the Institution, not having proper people who are going to collect it. Some of it is going to waste; young people are throwing it away because they don't know what we have.

So as far as black Americans are concerned, we are in a desperate situation for not having institutions interested in collecting this material, which certainly plots and tracks the history and culture of black Americans who have made such a significant contribution to America, as you know.

Just to mention another contribution, we were instrumental in getting a piece of Richard Hunt sculpture for the outdoor sculpture garden at Hirshhorn Museum.

Mr. YATES. Good for you.

Mr. KINARD. As well as some other black American art for the Hirshhorn Museum. So this is tooting our own horn a little bit. I won't go further with that, only to suggest that there is a tremendous need we have in this country to collect this material; we don't have enough space to store it, so it falls into our overarching institutional problem of not having enough space, the Anacostia Museum is not able to develop in a manner that it could collect and house these collections because we don't have space. The building we just built, while it is necessary and it is good, it does not give us any additional square footage of usable space than we originally had.

Mr. YATES. I think maybe you ought to talk to Mr. Rinzler and Mr. Kennedy, who are collecting that stuff now. Well, you've got colleagues who can help you, and we'll try to help you, too.

Mr. KINARD. I'd appreciate it, sir.

Mr. YATES. All right.

Mr. KINARD. Thank you.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICES

Mr. YATES. Thank you. Do we want to know about SITES. Ms. Loar, how is SITES doing?

Ms. LOAR. Well, we have the usual trials, but generally we are a very strong program.

Mr. YATES. Trials without errors?

Ms. LOAR. Well, there aren't too many errors.

Mr. YATES. Okay.

Ms. LOAR. It certainly is sought after by museums and galleries around the country, and with many requests coming from around the world. We get the usual fan letters. In fact, recently the New Jersey State Senate passed a resolution honoring one of our exhibitions, which was called "The Blacks in the U.S. Congress: The Long Road Up the Hill," and we organized that with the National Archives.

Mr. YATES. Good for you.

Ms. LOAR. You have in your stack of publications, there are three items from SITES. The first is "Update," which is our—it has a fish on the cover, it looks like this.

SITES CATALOG

Mr. YATES. I love these publications of yours; the pictures are just superb.

Ms. LOAR. There are 118 exhibitions listed in "Update"; about 82 of them are traveling around the country and the world.

Mr. YATES. Is this different year by year?

Ms. LOAR. Yes, it is.

Mr. YATES. Are the pictures different, too?

Ms. LOAR. Yes. Each page represents a different exhibition that's available, and this goes to 7,000 museums and galleries, which tells them what's available in the program and how to get it.

Mr. YATES. It suddenly occurs to me that I should have kept the copies I had, because they are beautiful copies.

Ms. LOAR. We'd be happy to supply you with them.

BUDGET NEEDS FOR SITES

Mr. YATES. Well, what do you need that you haven't got? You don't have guards to worry about.

Ms. LOAR. We don't have guards—no.

Mr. YATES. You just have shipping clerks to worry about.

Ms. LOAR. More than that, much more than that. Congress has been very generous. Unlike our museums, however, which by way of their Federal appropriations, support most of their operating costs, only 17 percent of sites operating costs are appropriated by Congress.

Mr. YATES. And the balance is what you get from your rentals.

Ms. LOAR. Except that there is 7 percent that is supported by the Institution annually, but the remainder of that does have to be recovered through our participation fee structure, which means we must operate like a business. And perhaps I should qualify the fan letters: they say keep the shows coming, but they are getting more expensive in terms of inflation and shipping and all the other costs that are involved with traveling exhibitions.

Mr. YATES. Does that mean that your requests for the shows are falling off?

Ms. LOAR. No, they really are not falling off; more and more museums simply cannot afford them. But we have, as I mentioned, been able to maintain on the road about eighty-two at this time, and another thirty-six are in the process of being planned. This is about what we've done in the past, but we can't go beyond that with our existing staff.

Mr. YATES. Well, how many requests do you have? Do you have enough requests to expand your operation?

Ms. LOAR. Well, in fact, we do. But that's not what I'm suggesting.

Mr. YATES. Well, I think you perform a pretty good service in going out to the country with these marvelous artifacts that you send out, and people are willing to pay to look at them.

Ms. LOAR. They are indeed.

LONG RANGE GOALS

Mr. YATES. But do you have a backload of requests? What question am I supposed to ask you, it suddenly occurs to me. Should your shop be more active because of the demand out in the country?

Ms. LOAR. I think a long-range goal for us, Mr. Chairman, is to get our Federal operating base up a bit so that the staff salaries that we have to charge to our exhibitions in the form of overhead do not make the program cost-prohibitive for some of the smaller museums. Even when we go after private support, for instance, the overhead that we do have to charge is not an inducement to fund the program. And that has become something of a problem.

I will say, however, that the booking ratios for the exhibitions for the next several years are very high, anywhere from 80 to 95 percent.

Mr. YATES. Does this tell where you go? Where have you been throughout the country?

Ms. LOAR. We've been everywhere. In fact, there are only four states in the last year where we have not been.

Mr. YATES. Do you generally wind up in big cities or small cities or small towns?

Ms. LOAR. A combination. In fact, next week in Chicago, the Renaissance bronze show, the catalogue for which you have in front of you, is opening at the Art Institute of Chicago. But the majority of our program goes to small and medium-sized museums.

SITES EXHIBITIONS

Mr. YATES. What's your relationship to the bronze show at the Art Institute of Chicago?

Ms. LOAR. We organized this exhibition with the Kunsthistorische Museum in Vienna, and it opened here in Washington—

Mr. YATES. Oh, this is the one at the National Gallery.

Ms. LOAR. That's correct, and following Chicago it's going out to Los Angeles.

Mr. ANDERSON. I'll bet you didn't know we did Carter Brown's shows, did you?

Mr. YATES. No, I didn't.

Ms. LOAR. We help all of our museums.

Mr. YATES. Did he pay you for it?

Ms. LOAR. Yes, he did.

Mr. YATES. It occurs to me that shouldn't you be going into smaller towns than Chicago with all the beauties of the Smithsonian not that I don't want you to go to Chicago, but shouldn't you be going to smaller towns to museums there? How many applications do you get from smaller towns?

Ms. LOAR. Most of them; in fact, 75 to 80 percent of our program does go to small and medium-sized cities. Where we get involved with larger cities and larger museums are primarily with some of the international exhibitions where those who are making the loans, whether it's a ministry of culture or another organization, require that these exhibitions go to some of the larger towns,

larger cities, and some of the more major institutions. And some of these projects are reciprocal arrangements. In the case of the Soviet 19th century, the Russian 19th-century painting show that we did with the Soviet Union, that exhibition opened here and will travel to two other cities, and they wanted large cities.

Mr. YATES. Is that the National Gallery?

Ms. LOAR. No, it opened at the Renwick Gallery, then it went on to the Smart Gallery in Chicago. It will go on to Los Angeles and to the Fogg Museum at Harvard University in Cambridge.

Mr. YATES. You are kind of a presenter, then, aren't you?

Ms. LOAR. We are indeed.

Mr. YATES. But you present things other than the Smithsonian.

Ms. LOAR. We facilitate these things on behalf of the Smithsonian, and the audiences of the Smithsonian, and on behalf of the museums throughout the country. Really they are the market that we serve. But we also serve the Smithsonian museums in trying to pick up on the research and the collections here in Washington, and take them out to museums across the country and to their publics.

Mr. YATES. I see. All right, I think you do very well. If your book and your justification indicates your activities, you are doing a splendid job. Thank you.

Ms. LOAR. Thank you for your continuing support.

SCIENTIFIC RESEARCH

Mr. YATES. David, can you tell us something about what you are doing?

Mr. CHALLINOR. Yes, sir, Mr. Chairman. The science bureaus are asking for roughly \$3 million in new funds for the 1988 appropriation.

Mr. YATES. "Science bureaus," meaning what?

Mr. CHALLINOR. This is the research aspect of the Natural History Museum, the Smithsonian Environmental Research Center, the Astrophysical Observatory, and the Smithsonian Tropical Research Institute.

That group of bureaus is asking for about \$3 million in new funds for research. Of that, about \$1.5 million is to allow reprogramming of money from our Rockville laboratory, which we shut down last November. The Museum of Natural History is seeking to use \$450,000 and four people to carry on research in molecular biology, reprogrammed from Rockville.

Mr. YATES. Is Dr. Rubinoff here?

Mr. CHALLINOR. Yes, he is here.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

Mr. YATES. Hi, Dr. Rubinoff. Do you want to tell us what you need? Are you the chief of the rain forest? [Laughter.]

Dr. RUBINOFF. What's left.

Mr. YATES. What's left.

Dr. RUBINOFF. Part of what's left anyway. The funds for which we request reprogramming are more for the other side of the question of extinction and the loss of biological diversity. What we are interested, particularly, in studying is the process of speciation, the

process of adding new species to the system, which is a much more lengthy process, much more complicated, and a much more difficult one to analyze. And that's the reason we made this request for the funds with which to use in molecular techniques that will allow us to address some of these questions more specifically. In those photographs in front of you, there are at least two examples of species which occur in Panama that are impossible to distinguish by just looking at them or by measuring them. You need to get into their cells and look at their molecules to be able to distinguish them.

I could also mention that we will break ground on April 3rd for the Tupper Research and Conference Center in Panama.

Mr. YATES. Is that from Tupperware?

Dr. RUBINOFF. Yes. Well, it's from the Tupper Foundation, matched by funds from the Congress.

Mr. YATES. It looks pretty good.

Dr. RUBINOFF. It's been a long process; we are anxious to get started.

Mr. YATES. What about the political conditions, do you have to worry about those?

Dr. RUBINOFF. No, we so far seem to be spared the problems elsewhere in Central America. I think that's likely to continue, although the problems of Central America—I guess we don't want to go into that here—are not going to go away very quickly.

Mr. YATES. Is there a stable government in Panama?

Dr. RUBINOFF. Yes, it's been the same government for fifteen years, very stable. Well, it's changed presidents, but essentially the same party has been running it the last fifteen years, and our relationship has remained constant and effective through the last fifteen years through changes in the governments.

Mr. YATES. I understand Texaco made a gift to you.

Dr. RUBINOFF. No.

Mr. YATES. In other words, an oilspill.

Dr. RUBINOFF. They gave us the oil, yes. [Laughter.]

We'd like to give it back.

STRI REEF RESEARCH

Mr. YATES. You are supposed to be investigating the effect of the oilspill on creatures there that are still living?

Dr. RUBINOFF. That reef, which we've had under investigation for about fifteen years, we already knew a good deal about the short-term and long-term fluctuations in the populations on the reef and in the mangrove forest, and in the seagrasses that live there.

Mr. YATES. Is that going ahead now?

Dr. RUBINOFF. With support from the Department of Interior, Mineral Management Service, we will be engaging in a five-year study to examine the recovery and to try to look at the changes.

Mr. YATES. The question was whether or not you would get money from them or whether you would get money directly from Smithsonian. Are you having any trouble getting funding from MMS?

Dr. RUBINOFF. MMS has come through. We've agreed to a contract. It should be signed by April 1st.

Mr. YATES. So that MMS will come to this committee and ask us for that contract.

Dr. RUBINOFF. Perhaps so, I don't know. I think it's part of their program.

Mr. YATES. It's the only place they can get it, I think.

Dr. RUBINOFF. It's part of their program.

Mr. YATES. I have something here. Oh, yes, here's a letter from Mr. Challinor in November. Mr. Challinor says "It's important to note here that many critics of MMS programs to date have pointed out that previous studies done by the agency lacked proper focus and results were less than scientifically valid. We have made every effort to adhere to the comments offered by MMS, including using guidelines from the National Academy of Sciences report on developing a model oilspill assessment program." And he says "Clearly, we are chagrined by the present impasse."

I take it from that, from what you've said, that impasse has been broken.

Dr. RUBINOFF. That's correct.

Mr. YATES. Okay.

Dr. RUBINOFF. We should sign a contract by the first of April.

Mr. YATES. All right, it's a good thing Mr. Challinor wrote me the letter.

Dr. RUBINOFF. That was some time ago. We were having some difficulty.

Mr. YATES. All right, no more; in other words, you are in good shape.

Dr. RUBINOFF. Apparently so in that respect. We are not entirely in good shape. The oilspill that you saw makes it a very nice place to study the effects of oil, but it's no place that anybody would want to go to study the normal mechanisms affecting the life of marine organisms. And so we are now in a position of having to find an alternative site to do our routine Atlantic coast biological studies.

RAIN FOREST STUDY AT STRI

Mr. YATES. What else can you tell me? What about your rain forest study?

Dr. RUBINOFF. The rain forest is attracting many, many scientists, and many studies are coming out. I think some of the reports are on the table there hiding behind the coats and things.

We've just produced a guide, which is in the pile of books in front of you, called—a day on Barro Colorado Island, this one here, is a pre-publication copy of that book—so that some of the many visitors that appear on Barro Colorado Island will have an opportunity to learn something about it, particularly if they are not accompanied by a guide. And so these are points along a trail that have markers, and, using the guide, they can learn something about what they may be seeing there.

Mr. YATES. Will they be seeing any mosquitoes?

Dr. RUBINOFF. They will be seeing a few mosquitoes; they will be seeing very many ticks.

Mr. YATES. Very many ticks?

Dr. RUBINOFF. Yes.

Mr. YATES. Sounds like a charming place.

Dr. RUBINOFF. That's the only organism we allow people to collect on the island.

BUDGET NEEDS FOR STRI

Mr. YATES. What else should I ask you that we haven't covered?

Dr. RUBINOFF. We are also requesting for next year the personnel and the rest of the equipment that will be necessary to open the Tupper building. We are beginning construction now, and in about 15 or 18 months it should be ready.

So a part of the equipment budget was deferred until this year, and we would hope that we would be able to open fully equipped.

Mr. YATES. Is this the type of equipment that should go in the building you've built?

Dr. RUBINOFF. Yes, some of it is needed as it is being built and some of it at the end before we open.

Mr. YATES. How much money do you need?

Dr. RUBINOFF. We need another \$740,000, I think it was, something like \$460,000 for FY 1988.

Mr. YATES. Is that for all of it, or just this——

Dr. RUBINOFF. The remaining section.

DIRECTORATE OF INTERNATIONAL ACTIVITIES

Mr. YATES. All right, thank you very much. I should hear from Mr. Reinhardt, I think, on the purposes of the International Center, shouldn't I, Mr. Reinhardt?

Mr. REINHARDT. Yes, Mr. Chairman.

Mr. YATES. Mr. Reinhardt, I'm glad to see you again.

Mr. REINHARDT. Nice to see you, as usual.

Mr. YATES. Tell me about the International Center. Are you going to have one?

Mr. REINHARDT. We are going to have one. We plan to open it along with the other entities in the Quadrangle in September.

Mr. YATES. What are you going to do after you're open?

Mr. REINHARDT. Well, our activities will be centered around a very large exhibition that has been designed and planned, and will be installed by SITES by Peggy Loar and her colleagues.

Mr. YATES. Oh, is this the birth exhibit?

Mr. REINHARDT. We call it "Generations." And we will have other activities, such as lectures, seminars, forums, and motion pictures for general public education on this subject.

Mr. YATES. The subject of generations.

Mr. REINHARDT. Well, on the general subject of other cultures. The "Generations" exhibition is an anthropological exhibition, it's a cultural exhibition. The general idea is that the public will know more about the rather obscure cultures of Asia, Africa, and Latin America that they don't know a great deal about today by way of the exhibition and related programs.

Mr. YATES. You don't have to worry about guards, do you?

Mr. REINHARDT. Not yet. The exhibition will need guards and will be a part of the guard force of the Quadrangle.

SITES THEFTS

Mr. YATES. Oh, I meant to ask Ms. Loar—Ms. Loar, have you lost any objects?

Ms. LOAR. No, sir.

Mr. YATES. No thefts, no losses from—

Ms. LOAR. Very, very little theft.

Mr. YATES. And little damage. Are you insured?

Ms. LOAR. We are insured, yes.

Mr. YATES. And the rentals pay for the insurance?

Ms. LOAR. Yes, a Federal indemnification program.

DIRECTORATE OF INTERNATIONAL ACTIVITIES BUDGET REQUEST

Mr. YATES. Okay. What else should I ask you about your operation, Mr. Reinhardt?

Mr. REINHARDT. Oh, Mr. Chairman, you must want to know how firm our base is for these programs?

Mr. YATES. Well, tell me how firm your base is. [Laughter.]

Mr. REINHARDT. If the requests that we have made this year are granted, we think that we will have an operative base for the future. We plan our programs about three years in advance, and the general base will be a little less than a million dollars if requested funds are made available this fiscal year.

Mr. YATES. You start with \$638,000 for this fiscal year.

Mr. REINHARDT. That's correct.

Mr. YATES. Personnel. And you want to go up by a third practically, right, to \$908,000.

Mr. REINHARDT. That is correct, sir. That includes some program planning for the celebration, of course, in 1992, which is lodged in our Directorate.

Mr. YATES. Why would you be doing something in connection with the tropical biological workshop development?

Mr. REINHARDT. Our second series of programs will be on this general subject of tropical biology and the deterioration of the rain forest. The second exhibition in the International Center to open in mid-1988, calendar 1988, will be on this subject. Hence, we would be planning ancillary programs in connection with the exhibition.

INTERNATIONAL SCHOLARS

Mr. YATES. You don't have anything to do with international scholars, do you?

Mr. REINHARDT. International scholars? No, not per se; we have no exchange program.

Mr. YATES. Does the Smithsonian have an international scholars operation?

Mr. ADAMS. Oh, yes.

Mr. REINHARDT. Yes.

Mr. YATES. And that has no connection with Mr. Reinhardt's operation.

Mr. ADAMS. We bring in fellows from around the world, as well as from this country. It runs through the Office of Fellowships and Grants, but the people who are international, are, in fact, in some sense coordinated, adjoining what his office is doing. It isn't administered out of the Directorate.

Mr. YATES. Your administration is out of your administrative branch.

Mr. ADAMS. Yes.

Mr. YATES. All right, thank you.

Mr. REINHARDT. Thank you, Mr. Chairman.

NATIONAL ZOOLOGICAL PARK RESEARCH

Mr. YATES. Mr. Robinson, do you want to tell us about the Zoo, other than the ferrets?

Mr. ROBINSON. Well, the ferrets really, sir, are an object lesson in the quality, I think, of our research. I was very lucky to move from the world's best tropical research institute to the world's best zoological research institute, if you will excuse our modesty.

Mr. YATES. I will.

Mr. ROBINSON. And the ferrets are just indicative—we in fact got the news today that the first ever in vitro pregnancies have resulted in cats that are part of the same research operation, which is very exciting because it's almost science fiction. We are now at a stage where we may be able to save species as cryo-preserved embryos, frozen embryos. We can already store the sperm of twelve species of major mammals, including elephants. I think this is a really exciting program.

Mr. YATES. Why so late? They have been artificially inseminating cattle for years. Where have you been, then?

Mr. ROBINSON. As our veterinarian, Dr. Bush, would tell you if he were speaking now, it is an incredibly more difficult problem to remove sperm from a male elephant. [Laughter.]

Mr. YATES. You mean they are not cooperative?

Mr. ROBINSON. Or, for that matter, he's also working with lions and tigers. And you must, I think, sir, appreciate the problems involved there. [Laughter.]

Mr. YATES. Can't you call in lion tamers?

Mr. ROBINSON. We've got one in effect, and they are doing remarkable work in the field of wild animal genetics. I think this is the complementary side to the work that Dr. Rubinoff is doing in rain forests, that we are providing means to preserve some of the key species through methods like this, through breeding in captivity.

But we have also, if I could at this stage in the afternoon, just put a new vision that we have before you. We developed it over the last three years, a vision of transforming the Zoo from a zoological park into what we hope to call a biological park, which will bring together all the various aspects of the living world in one place, where we will put emphasis on plants as well as animals, where we will use the techniques of museums alongside the techniques of zoos, and, I think, provide a basis for a much broader, holistic education. And at this stage of this century, I think, contact with the living world is becoming increasingly difficult for urbanized people, and to give them the impression of the beauty and wonder and excitement of the whole living world, we need to move from just animals to plants and animals, and also to devices and explanations that enable people to know what it's like to be inside an animal—what its heart looks like and how it functions—and, even further

than that, to integrate the various aspects of knowledge that the Smithsonian itself represents in a more holistic way. So that when you were talking about American Indians this morning, I started thinking about the animals we had that were absolutely vital to American Indian culture—the bison, the bear, the wolf, the prairie dog—and how we could, next to those animals, exhibit some Indian artifacts that were based on those animals, bring the whole thing together, and put some of the——

Mr. YATES. Well, I think you will find them in Dr. Hoffmann's dioramas now, won't you?

Mr. ROBINSON. Yes, but a different audience goes to the Zoo to look at the live animals, and I think we could capture those.

Mr. YATES. I think he'd just as soon get rid of his dioramas, if you want to use them. [Laughter.]

Mr. ROBINSON. I think we would want something slightly more sophisticated than his dioramas, without offense to Dr. Hoffmann—I said an end of the twentieth-century mode of exhibition.

We have one practical concern, and that is last year, you may remember, you forwarded to the Joint Committee our request for \$3 million to remodel our research facility, and at that time it went to the Joint Committee and they deferred it. And, since I'm not very tactful, let me read what I wrote to express what we felt at that time rather than do it off the top of my head. We felt that the compromise that was achieved then gave us the strong feeling that that money would be introduced into this year's budget, and it was, but it was eliminated by OMB. So we now face a research department that is extraordinarily active and productive—and you've seen some of the things that we have achieved—based in a building that was built in the last century. And we feel that refurbishment of that research department so that all this active research can be put into modern surroundings is a thing that you might consider as perhaps a——

ZOO SECURITY

Mr. YATES. All right. Do you have enough guards?

Mr. ROBINSON. We have an excellent police force, and we have only lost one object in the last year: just after Christmas somebody stole our bush turkey.

Mr. YATES. I take it it hasn't come back.

Mr. ROBINSON. Which is not a turkey at all, and I think they read the label and thought they were stealing a meal. And the fact that they didn't come back for its mate may indicate that they tried to eat it, and they decided that it wasn't edible. So we've had a very good record.

On the safety question we had an interesting occurrence—the last snowstorm, where all the trees came down, a tree fell over our jaguar cage, made a big hole in the roof, and the jaguars preferred to stay in the National Zoo to leaving and going down Connecticut Avenue.

Mr. YATES. Could they have escaped?

Mr. ROBINSON. Yes, easily, there was a huge hole in the roof of the cage because the tree fell straight over it. But they stayed inside.

Mr. YATES. I remember having seen a movie where something like that happened.

Well, anything else you want to tell us? That's fascinating.

Mr. ROBINSON. The pandas mated last week.

Mr. YATES. What's the health of all your animals, is it very good?

Mr. ROBINSON. Yes, we had 1,200 births and hatchings last year, which is remarkable.

Mr. YATES. It is. Were all maternities at your place? [Laughter.]

Mr. ROBINSON. They were at Rock Creek and at Front Royal.

Mr. YATES. Okay, I think that's about all. I thank you very much for a very interesting presentation.

Mr. ROBINSON. Thank you, sir.

Mr. YATES. What haven't we covered?

Mr. ADAMS. I think you've been bubbling along very nicely.

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

Mr. YATES. David is holding his finger up.

Mr. CHALLINOR. Did you get all the answers you needed from Irwin?

Mr. YATES. Irwin, how much money do you need for your computers again? Is it \$130,000?

Mr. SHAPIRO. Well, as I mentioned, it's for a—

Mr. YATES. That's what you need, isn't it?

Mr. SHAPIRO. For the infrastructure, computers are our most pressing need, and to give you an illustration—I may have mentioned before—we have a post-doc at the center who finds it cost-effective to fly back to the institution in California from which he got his Ph.D. to use his residual rights on their computer system rather than to use ours, to give you an illustration.

Mr. YATES. Is it cheaper to have him non-flying than flying?

Mr. SHAPIRO. Well, how should I put it, it's a great embarrassment to us, to say the least, to have one of our prize post-docs flying back to UC-Berkeley to use the computer there. And several people who can afford it have bought their own computers so that they can tie into our facility at night when it is not as overcrowded as during the day. It's absolutely impossible during the day.

Mr. YATES. How much money do you need?

Mr. SHAPIRO. Well, we are really \$500,000 short of our plan, that was approved some years back, through accumulation of cuts.

Mr. YATES. Are you now in the second year of asking, then? Last year you were asking for \$130,000.

Mr. SHAPIRO. No, I had indicated in a special response to the question asked about how far behind we were relative to our plan. We got some of that back through the—

Mr. YATES. So you need \$530,000.

Mr. SHAPIRO. No, \$500,000.

Mr. YATES. I mean \$530,000. We gave them \$150,000 that you lost in conference—no, I lost it in conference; apparently I wasn't as much of a champion for you as I should have been. That \$130,000 has now gone up to \$500,000?

Mr. SHAPIRO. No.

BUDGET NEEDS FOR SAO

Mr. YATES. Back to my question: How much do you need?

Mr. SHAPIRO. \$500,000. How shall I put it? \$500,000 would put us back—when you put all the factors together—

Mr. YATES. Put you back on the track.

Mr. SHAPIRO. Right.

Mr. YATES. What's the total cost going to be? Is \$500,000 the total cost?

Mr. SHAPIRO. No, it is not the total amount of money for computers. I'm sorry, I'm not focusing on your question.

Mr. YATES. I know, I'm not either. [Laughter.]

Apparently we aren't relating to each other. There's a failure of communication.

Mr. SHAPIRO. We need a computer. [Laughter.]

Mr. YATES. Exactly. The \$500,000 is an installment payment, or will that cover all the cost?

Mr. SHAPIRO. That will bring us back up to where we had planned to be.

Mr. YATES. And where had you planned to be?

Mr. SHAPIRO. We have a whole five-year program that we laid out in a big fat report, and \$500,000 would put us back where we would have expected to be from that report.

Mr. YATES. What does that big fat report show your total cost to be?

Mr. SHAPIRO. It's given year by year, and for the five years I think it was approximately \$5 million. I can look up the exact number.

Mr. YATES. So, after five years you won't have your computers anyway, will you?

Mr. SHAPIRO. No, this is a cumulative total; this would be the third year of the program.

Mr. YATES. Will you be able to buy operating computers for \$500,000 which will stop your post-doc from flying back to California?

Mr. SHAPIRO. Yes.

Mr. YATES. You will.

Mr. SHAPIRO. If we had that increment, we would, that's correct. It's a little bit of a complicated equation, because, as you pointed out earlier, computer costs have been going down for the same computer power.

SAO INSTRUMENTATION

Mr. YATES. Mr. Shapiro, when we had an informal meeting with Mr. Challinor, we talked about mirrors—another telescope that you wanted. Is that in this budget?

Mr. CHALLINOR. We are asking for \$777,000 new dollars in fiscal 1988.

Mr. YATES. To buy what?

Mr. CHALLINOR. \$252,000 new dollars are for two people to work on what we call the submillimeter array.

Mr. SHAPIRO. That's not quite accurate.

Mr. CHALLINOR. You have \$150,000 in your base.

Mr. SHAPIRO. Yes, but it's not to work on the array; it's to work on submillimeter astronomy.

Mr. CHALLINOR. Astronomy—toward building the array.

Mr. SHAPIRO. Well, building up competence in that field. The array is a separate instrument which would put us in the forefront—

Mr. YATES. What's an array?

Mr. SHAPIRO. In this particular case, it's a set of six telescopes sensitive to radiation and submillimeter wavelengths. Those are wavelengths between radio and infrared. This is the last unexplored region of the heavens that we can observe from the ground. This has not yet been explored because there hasn't been the technology to build the receivers sensitive enough to detect these rays, and the technology to build surfaces sufficiently large and sufficiently precise to focus those rays.

Mr. YATES. Why do you want to stay on the ground when you can get research from satellites?

Mr. SHAPIRO. Well, the difference is a matter of about a factor of \$100 to \$1,000 in cost, and you want to, how shall I put it, make your mistakes on the ground, learn on the ground, so you can take advantage, without wasting money or space.

Mr. YATES. In other words, what you are saying is you weren't really ready to go for the project.

Mr. SHAPIRO. That's correct; this would be a premier instrument on the ground for something like two decades, at which time it would be sensible to consider a space array, but not before.

If I may, I just wanted to brag a little bit and introduce it.

Mr. YATES. Is this as dramatic as the ferrets?

Mr. SHAPIRO. I suppose—they are not as furry, though. [Laughter.]

The American Astronomical Society put out a release just in January reporting on the twelve most important astronomy stories worldwide in 1986—worldwide. Of those twelve, people at the Center participated either in whole or in part in nine of the twelve, which I think is pretty impressive on a worldwide basis.

HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS

Mr. YATES. Which Center are we talking about?

Mr. SHAPIRO. The Harvard-Smithsonian Center for Astrophysics.

Mr. YATES. This is at Harvard or Arizona?

Mr. SHAPIRO. Well, how shall I put it—

Mr. YATES. Or a combination of both?

Mr. SHAPIRO. The telescope is at Arizona. I am only talking about the people in Cambridge who use those telescopes, not the people at Arizona.

Mr. YATES. Where do the computers go?

Mr. SHAPIRO. Most of the computers we are talking about go in Cambridge, but some of them go in Arizona.

Mr. YATES. Now, Harvard has got much more money than the Federal government. [Laughter.]

Won't Harvard buy the computers?

Mr. SHAPIRO. How shall I put it? Harvard has bought some computers; Harvard has also contributed to the Center's complex of computers.

Mr. YATES. Won't they buy these?

Mr. SHAPIRO. Where's the money going to come from? I run the Harvard part with my other hat. We are in terrible trouble with maintenance, but you don't want to hear those stories. [Laughter.]

The fifty-year old buildings—you are hearing here of an airconditioning system, an HVAC system, that requires \$100 million to fix for the Museum of Natural History that's 23 years old. I'm dealing with maintenance problems from buildings that haven't been touched in fifty years.

Mr. YATES. So, what good is it to put computers in them? [Laughter.]

Mr. SHAPIRO. What I was trying to lead up to was simply—in order for us to continue to be in the forefront, we need instrumentation that will do forefront science, and we have to—

NATIONAL SCIENCE RESOURCES CENTER

Mr. YATES. Okay, you've made your point wonderfully. What else have we not covered? Yes, Ralph.

Mr. RINZLER. There's a priority of public service that is touched on in the Secretary's introductory statement, represented here by the Director of the National Science Resources Center. It's a modest request, but it's our highest priority, and one which we would certainly like to put into the record, if you would like to hear a bit from Dr. Lapp, who is here.

Mr. YATES. All right, Dr. Lapp, take the chair and tell us about your endeavor.

Dr. LAPP. Well, this is a project that was started as a result of a discussion between Secretary Adams and Frank Press, the President of the National Academy of Sciences, growing out of a concern of the scientific community in particular about the state of pre-college science and math education. And from that time—it was about two years ago—the national interest in this has grown, because of concerns about our national competitiveness and our ability to compete in the international market place. We have found that one of the major problems with math and science education is that the people who know how to improve it and are at the center of scientific development and technological developments are out of touch with the education community. They are out of touch with teachers in classrooms, most of whom have been there for twenty years and have not had any updating on what's gone on since they left college.

We might hope that this deficiency would be compensated for in the production of textbooks, but we found that has lagged behind also.

So there has been a deterioration of what's going on in our high schools and our elementary schools.

Mr. YATES. It must be secular humanism. [Laughter.]

Dr. LAPP. That was again in the papers today. I don't think that's going to be a long-term problem, a small perturbation I think.

But the thing we have to concern ourselves with is, "How do you help teachers in schools in a nation that prides itself on diversity, on local control of education, and yet manage to compete with nations that are highly centralized in their educational systems, like Japan and eastern bloc nations, that have the ability from the national level to develop the resources, putting a lot of funds into them?"

Mr. YATES. Have you posed this question to Dr. Bennett?

Dr. LAPP. We've actually been in close touch with Secretary Bennett and his staff on this, and are working with them.

Mr. YATES. Isn't he going to give you a grant?

Dr. LAPP. We have a small grant from the Department of Education.

Mr. YATES. What is it you want from us, then?

Dr. LAPP. We really wanted your awareness of this effort. It is starting at a very small level.

Mr. YATES. Do you want any money from us?

Dr. LAPP. We are asking for some money in the Federal budget this year, which I think is—

Mr. RINZLER. \$125 thousand.

Mr. YATES. From what you say, it sounds like a most productive and worthy endeavor.

Dr. LAPP. I think it can lead to a lot. I think what's needed here is the building of an institution that will not be a short-term or ephemeral effort, as so many efforts of ours have been in the past; and institution that will build links between the scientific community and the school systems.

And I think we've begun to do that.

SMITHSONIAN ENVIRONMENTAL RESEARCH CENTER

Mr. YATES. Okay, good enough. We welcome that. I wish you were doing it in the humanities, too.

David has his finger up. Thank you, Dr. Lapp.

Mr. CHALLINOR. Mr. Chairman, before we end, for the Smithsonian Environmental Research Center in Edgewater, Maryland we allocated in FY 1987 \$862,000 from the S&E budget into construction to help construct a lab that is now being built in Edgewater. We are requesting in our 1988 budget that that sum be returned to the S&E base, and I did want to call your attention to that.

ADMINISTRATIVE SERVICES

Mr. YATES. All right, did you want to say something, Mr. Jameson?

Mr. JAMESON. By way of a small thank you to you, I would just put in a small plug for administration. The thank you is that administrators tend to get beaten on down at the Smithsonian from time to time—and often they deserve it. And I think a hearing such as this, where we have an opportunity in a manageable amount of time to get some sense of the good work of the Institution makes administration a lot more worthwhile, so thank you for doing that.

The small plug is on behalf of a variety of folks in the room, including Ann Levin; Richard Siegle; Bob Burke, who runs our secu-

rity; Mike League, who runs our plant maintenance; and Bill Billingsley, who runs our safety program—there are a number of important things that—

Mr. YATES. What about the judge, shouldn't you include him?

Mr. JAMESON. Well, the judge is—

Mr. YATES. Not part of the administrative—

Mr. JAMESON. Yes he is, as is Bob Adams, Dean Anderson, and some others in the room.

But there are a number of important things in the budget document before you, and I hope that you will look at them.

Mr. YATES. Well, we do look at them very carefully. As I say, I think this is a unique institution, I think that its staff is unique, and any way that we can help we will try to help. The problem is you are going to have problems with the Senate. [Laughter.]

Mr. ADAMS. Mr. Chairman, on the assumption that we are drawing to a close here—

Mr. YATES. A valid assumption. [Laughter.]

Mr. ADAMS. I'd like to say that we are really very grateful for the opportunity that you've given us and sympathetic consideration that you've given us. And I might say for the opportunity, not simply to defend what we propose to do, but to suggest what we have not been given an invitation to do—and I think that's something for which we are all very grateful.

Mr. YATES. Well, we thank you very much for your very kind words. We are proud of what you have done, and I'm only sorry that we can't let you have the kind of opportunity and initiative that you want to have and should rightly have. The budget constraints are too great.

[Discussion of the record.]

Mr. YATES. I made my inquiry. With that, Mr. Adams, we will close the hearing. We will have additional questions for the record.

[Questions and answers for the record follow:]

Smithsonian Institution

Additional Committee Questions

Facilities at SERC - Edgewater

Question: You show restoration of the \$862,000 that the Conferees agreed to transfer to the Restoration and Renovation account as a result of closure of the SERC-Rockville facility, to be used to renovate facilities at SERC-Chesapeake Bay. How exactly are those funds being used in FY 1987? Provide a breakdown of projects and costs for the record.

Answer: The funds will be used solely to award a construction contract for a new laboratory wing at the site, estimated to cost \$862,000.

Personnel Payroll System

Question: Included in the breakdown of uncontrollable costs is \$400,000 for the personnel payroll system, which is being transferred to the USDA National Finance Center. Why did you decide to use the NFC for your payroll system? What is the basis for your estimates of the savings from not using your own computer, and for the Trust share of the costs for Trust employees? How do you justify the increased cost of using NFC over continuing to use your own internal system?

Answer: The Personnel/Payroll Project has a long history. The current payroll method dates to 1968. It is strictly a payroll process, not a personnel system. Only 45% of the existing process is computerized. What is computerized runs on the Honeywell and is poorly documented. Even more to the point, the process is inadequate to the needs of the Institution. For example, employees wishing to change their address and their name (a common circumstance of the newly married) must opt for one change or the other per pay period. Nor can it handle new requirements such as FERS.

From 1980-83, the Institution hired RDW as a consultant, purchased an MSA payroll/personnel package and attempted to install it on the Honeywell as a replacement for the current process. The project was notably unsuccessful and was scrapped.

In 1984, the Institution purchased an IBM 4381 to replace the Honeywell as our mainframe computer. Coopers & Lybrand, the Institution's outside auditors, did a study to determine if the existing payroll system might be moved to the IBM. They concluded that the existing system was so poorly documented, that migration was impossible.

With this information, the Office of Information Resource Management (OIRM) began to explore other alternatives to improve payroll processing. At the urging of the internal auditors, the external auditors and OMB, the Institution investigated the services offered by USDA's National Finance Center.

Price Waterhouse was asked as an independent consultant to advise the Institution, having been recommended by other government agencies as

knowledgeable in the handling of Federal payrolls. After reviewing OIRM's work and all previous studies, Price Waterhouse also concluded that the USDA's National Finance Center offered the best alternative. Specifically, USDA could provide an already tested personnel/payroll system that met Federal requirements; the system was well documented; the Finance Center was experienced in user training; and above all it was willing to devote the time and attention to Smithsonian's particular needs, allowing the Institution to have a new system up and running in a reasonable timeframe at an acceptable cost (\$1.8 million in Trust Funds including all preceding study work.)

Implementation is in process. The conversion has necessitated much clean-up work to Smithsonian files and practices. It must be recognized that the Smithsonian staff is inexperienced in state-of-the-art computer payroll/personnel systems; moreover, it has had no computer experience in personnel. Use of the USDA National Finance Center allows the Institution to take a quantum leap forward in personnel and payroll control and efficiency.

It is difficult to estimate the cost savings. The USDA Finance Center charges \$90.00 per employee per year for processing. In addition, there are hardware and software charges necessary to transmit data to the Finance Center. Against the total estimate of \$630,000 for some 7,000 employees including temporaries, we have deducted approximately \$135,000 for some 1,500 Trust employees (which will be paid from Trust funds) and \$95,000 presently available for Civil Service employee processing. The balance of \$400,000 represents new costs associated with Federal employment.

The additional costs are justified on the basis of obtaining a modern fully documented system that will be maintained by the NFC as new legal or regulatory changes are made that affect Federal employees. Data security and internal controls will be greatly improved. Bureaus and offices will obtain better and more timely personnel and budget information for management process.

OMB Grade Target Reduction

Question: A \$373,000 decrease is included for the FY 1988 portion of the OMB grade target reduction. Have you met the goals in previous years? What is your experience to date this year?

Answer: The Smithsonian thus far has relinquished a total of \$933,000, meeting the requirements imposed by OMB for the program. The cumulative reduction over the five-year period (FY 1985-FY 1989) will total \$1,492,000.

Question: How are the reductions being accomplished?

Answer: To accomplish the necessary reduction, each activity contributed a share of the total reduction based on wages paid in the preceding year to employees in the targeted grade levels. Bureaus and offices absorb the budgetary reductions by reducing grade level before refilling vacancies, hiring at step one of the grade as positions are refilled, and other appropriate actions.

Utilities, Postage and Communications

Question: P. 15. Last year, you estimated electricity costs for FY 1987 would be \$8,908,000. The conferees cut this by \$394,000, leaving about \$8,500,000. Now you are showing the 1987 estimate at \$7,201,000, with 1988 increasing to \$8,003,000. What is the basis for reestimating 1987 costs to the lower level? Why do you think 1988 costs will increase to the extent indicated?

Answer: The original FY 1987 estimate for electricity as presented in the FY 1987 budget request was based upon actual costs experienced in FY 1985, adjusted to take into account full occupancy of the Museum Support Center and the new Quadrangle facility. The FY 1987 estimate, as it appears in the FY 1988 budget request, is based upon actual costs experienced in FY 1986, and has been adjusted for less than full occupancy of the MSC and Quadrangle facilities due to problems experienced in obtaining storage cases at the MSC, and construction delays experienced at the Quadrangle. As the justification for our electricity costs increases indicates, our current FY 1988 estimates are based upon actual costs experienced in FY 1986, actual costs for two months of FY 1987 projected for the full year, and our estimated costs of full occupancy, visitors and staff, for the MSC and Quadrangle. We have tried to adjust these costs to take into account normal weather patterns, visitation rates, expected rate increases and the affect of our vigorous energy conservation program, all of which can have a dramatic impact on the accuracy of our estimates. The current estimate of electricity costs for FY 1988 reflects our best estimate, based upon the facts at hand at the time of our budget submission. While history may prove that our current estimate is inaccurate, review of previous years' estimates has proven that our estimates have been high or low about an equal number of times.

Question: If the 1987 costs are lower by \$1.3 million as your estimates indicate, how would the balance of funds be used?

Answer: Any balance of funds in the electrical sub-account would first be used to offset any deficits in the other utility sub-accounts (steam, gas, fuel oil/water, telephone, postage). If the total utilities account still projects a surplus, these funds would be returned to the central Smithsonian to be reprogrammed to other Institutional needs in accordance with existing reprogramming guidelines. One likely utilization of surplus utility funds might be to fund security costs of extended evening hours this summer.

Question: You have also reestimated both the estimates of use and unit costs for steam in 1987, and show a further increase in use for 1988. Please explain the projected increases for both 1987 and 1988.

Answer: The estimates for 1987, which appear in the 1988 budget, reflect actual rates being charged by GSA for the period October-December 1986, and actual consumption figures for this same period. As such, the new estimates take into account the effect of actual weather patterns. The FY 1987 estimate which was part of the FY 1987 budget submission only estimated what we felt GSA would charge for steam and what the actual weather pattern would be. The increase for FY 1988 is attributable mainly to our estimate of the cost associated with full occupancy, both staff and visitor, of the Quadrangle which is scheduled to open to the public in September 1987 and our indication from GSA that they do not anticipate any rate changes to take effect.

Question: What was the basis for the actual increase in gas unit costs in 1986, which you are now projecting to continue in 1987 and 1988?

Answer: Unit cost figures are derived by dividing the total cost by usage. As such, the unit cost will vary as the costs or usage varies. The actual cost of gas in FY 1986 was higher than had been estimated due to a rate increase which went into effect during the fiscal year. Coupled with this increase in costs was decrease in consumption, attributable mainly to a milder than normal winter in FY 1986. The result of less usage and higher costs is an increase in the unit cost. Our estimates for FY 1987 and FY 1988 reflect increases in both consumption and costs for additional occupancy of the MSC and new facilities at the NZP and a return to normal winter temperature for the area. However, we anticipate that these increases will be less than expected due to increased energy conservation methods. As a result, we anticipate being able to maintain a stable unit cost for gas during FY 1987 and FY 1988.

Question: Telephone costs are projected to increase 9% and postage costs 20% in 1988. What have you done to control these costs, particularly in terms of usage?

Answer: The Smithsonian Institution began cost reduction programs in communications and postage in 1981. To date, these programs have proved successful in either reducing overall costs in some cases, or drastically reducing the rate of cost increases in others.

The impact of rapidly increasing telephone service costs has been slowed by various steps, such as: the introduction of less expensive single line telephone sets in lieu of more expensive button-type telephone instruments; the reduction or elimination of intercommunication systems; the use of GSA-negotiated service contracts; and an aggressive campaign which has been successful in lowering our long distance usage. Although the overall costs are rising, they are rising at much lower rates of increase than that typical throughout the telecommunication industry, and would rise even more significantly if the above measures were not taken.

Postage costs are expected to rise in FY 1988 primarily due to an anticipated rate increase; however positive steps to reduce costs have been taken through the use of lower mail classification on non-time sensitive mailings, the elimination of the use of Priority Package services, and the consolidation (pouching) of mail to the same destination.

Space Rental

Question: P. 17. You are requesting an increase of \$234,000 in rental costs. Explain why you need to have the reduction of \$116,000 applied in 1987 restored? Why shouldn't Trust funds be used to make up this difference?

Answer: The \$116,000 shown for 1987 is a projected deficit in the rental account. The \$234,000 increase in FY 1988 includes these funds and an expected \$118,000 increase in costs for FY 1988 over FY 1987 costs. The projected deficit in FY 1987 will have to be covered by reprogramming funds from other sources within the Institution. To preclude this again happening in FY 1988, an increase of \$234,000 is requested. Smithsonian Trust funds are currently used to offset the total costs of rental space by paying for the actual space

occupied by Smithsonian Trust funded auxiliary activities in SI buildings at the actual rental rate being paid by the SI for leased space in L'Enfant Plaza. The rental account provides funds for lease of only 4 properties. At L'Enfant Plaza, Trust funds already cover 60% of the total cost; at North Capitol Street, there are no Trust fund activities; as for the 2 properties leased by the Archives, Trust funds already pay for about 50% of the overall program (see page 120). It would be inappropriate to increase the Trust contribution by \$116,000 as the resulting division between Federal and Trust funds would no longer reflect the true relationship between Federal and Trust activities.

Question: Explain what is meant by "increased Federal costs due to relocation of the Museum shops' warehouse activities to 1111 North Capital in FY 1986". Where were the warehouse activities before, and why were they moved?

Answer: The increased Federal costs are due to the relocation of the Museum Shops' Warehouse activities from, not to, 1111 North Capitol Street in FY 1986. The Museum Shops, as a Trust auxiliary activity, were paying for the space they occupied at 1111 Capitol Street at the existing per square foot cost. As such, they were reducing the rental costs paid by Federal funds at this location. In July 1986, this activity moved to leased facilities located in Landover, Md. which is paid totally by Smithsonian Trust funds. This move was necessitated by the need for additional space to expand the warehouse operation, to meet the needs of increased sales activity in the Smithsonian Museum Shops and to insure the effective and efficient daily replenishment of our Shops.

However, as a results of the move of this Trust funded activity from 1111 North Capitol Street, it has become necessary to cover the costs formerly paid by the Museum Shops from Federal funds.

Space Needs for Woodrow Wilson Center

Question: When the witnesses from the Woodrow Wilson Center appeared before the Subcommittee, they testified as to their need for additional space, and that the Smithsonian has told them they have none they can give them. Do you have any plans for helping the Center with their space needs?

Answer: A concept plan has been developed that would assign to the Center the western portion of the Arts and Industries Building. The realization of this plan would require a complete renovation of the interior of the building including the relocation of heating, ventilating and air conditioning equipment from interior building spaces. This renovation and relocation is essential if sufficient space is to be created to meet both the Center's and the Institution's needs. While no firm design or cost estimates have been prepared, such a project in this historic building would cost \$30-\$40 million. In the short term, no additional space is available for assignment to the Center.

Transfer of Research Activities from SERC-Rockville

Question: P. 20. The request for the Assistant Secretary for Research is \$1,263,000, an increase of \$27,000. Due to the closure of the Rockville facility, this office has assumed responsibility for the carbon dating activities and solar research studies formerly conducted at Rockville. What funding has been transferred to this office for each of these activities?

Answer: A total of \$243,000 was transferred to the Office of the Assistant Secretary for Research to contract for carbon dating services (\$80,000) and to continue solar research studies (\$186,000).

Question: Do you intend to spend the same amount for each as was spent at Rockville? If not, how will the difference be used?

Answer: Yes, it is intended to spend the same amount for each activity as was spent at Rockville. Both of these activities were assigned a high priority for retention in the Institution by external reviewers.

Joseph Henry Papers

Question: The Joseph Henry Papers project has been transferred into this office. How long is the project expected to run? How many volumes do you plan to publish?

Answer: Assuming present levels of funding, the project will be complete in twenty to twenty-five years. We plan to publish a total of fifteen volumes.

Submillimeter-wave Astronomy

Question: P.23. The request for the Smithsonian Astrophysical Observatory is \$10,217,000, an increase of \$941,000. Included is an increase of \$252,000 for instrumentation for submillimeter-wave astronomy. How exactly is the \$150,000 provided in 1987 being used?

Answer: The \$150,000 is being used to (1) hire a person with appropriate skills for research and development work in submillimeter-wave instrumentation, and (2) provide a fund for this person to begin equipping a laboratory for development of such instrumentation. A suitable candidate has recently been recruited and laboratory space identified.

Question: Will \$157,000 included in the request to continue outfitting a laboratory complete that effort? If not, how much more will be required?

Answer: The \$157,000 falls short by about \$290,000 of completing the outfitting of the laboratory. The total cost was contained in SAO's original FY 1988 budget request.

Question: What is the expected total cost of this instrumentation effort, and when do you expect it to be complete?

Answer: The expected total cost of initial purchases of equipment for the new laboratory is \$500,000. The total annual cost thereafter for this instrumentation effort is expected to be \$400,000 (\$150,000 for salaries and benefits, \$150,000 for supplies and services, and \$100,000 for new and replacement equipment to keep pace with expected advances in technology). The effort is anticipated to continue for many years (see, also, response to the following question).

Question: How exactly does this effort relate to your desire to construct eventually a pioneering array of submillimeter telescopes?

Answer: The submillimeter-wave instrumentation laboratory will develop state-of-the-art submillimeter wavelength receivers to be used on existing airborne and ground-based telescopes for important new, exploratory, astronomical observations. At such time as the proposed pioneering array of submillimeter telescopes is built, the laboratory will expand its production and maintenance capabilities to provide receivers for this array.

Personnel Costs for FY 1988 Increases

Question: For this, and all requests which involve additional workyears, provide a table showing the position, related workyear, lapse rate applied (if applicable), and funds required to fully fund the position in future years, if applicable. For all requests in this budget related to workyears provided in a previous year, prepare a table showing positions, initial workyears funded, and when funded, 1988 funding and workyears requested.

Answer: Table A provides the requested information on new positions requested in the FY 1988 budget. All positions are funded for a full year for FY 1988, with no lapse rate applicable, except for the positions requested to staff the new Tupper Center and BCI and Gamboa facilities at STRI. These are scheduled to be hired mid-way through the fiscal year and assume a 50 percent lapse rate.

Table B provides the requested information on the funding requirements to annualize the partial-year funding of positions approved in the FY 1987 budget.

TABLE A

Page 1

SMITHSONIAN INSTITUTION

NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET

4/1/1987

BUREAU/ POSITION TITLE	# of FTE Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)	FUNDING REQUESTED IN FY 1988 BUDGET FTE \$ (000s)	ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS FTE \$ (000s)
ASTROPHYSICAL OBSERVATORY					
Lead Physicist	1	1.0	61	1.0	61
Technician	1	1.0	31	1.0	31
Subtotal	2	2.0	92	2.0	92
TROPICAL RESEARCH INSTITUTE					
MOLECULAR BIOLOGY					
Scientists	3	3.0	107	3.0	107
Technicians	3	3.0	75	3.0	75
TUPPER CENTER					
Maintenance Mechanics	2	2.0	34	1.0	17
Custodial Workers	2	2.0	18	1.0	9
Electronics Mechanic	1	1.0	13	0.5	7
Air Conditioning Equipment Mechanic	1	1.0	13	0.5	7
Food Services Worker	1	1.0	10	0.5	5
Biological Technician (Herbarium)	1	1.0	21	0.5	11
Animal/Plant Keeper	1	1.0	11	0.5	5
Editorial Assistant	1	1.0	19	0.5	9
Management Services Assistant	1	1.0	21	0.5	11
Supply Clerk	1	1.0	15	0.5	8
Procurement Clerk	1	1.0	15	0.5	8
Receptionist/Clerk typist	1	1.0	12	0.5	7
Secretary	1	1.0	17	0.5	10
Messenger	1	1.0	12	0.5	7
BCI/GARDA FACILITIES					
Food Service Workers	2	2.0	18	1.0	9
Secretary	1	1.0	15	0.5	8
Custodial Workers	3	3.0	27	1.5	13
Subtotal	28	28.0	473	17.0	154

TABLE A
Page 2

SMITHSONIAN INSTITUTION NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET 4/1/1987					ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS	
BUREAU/ POSITION TITLE	# of FTP Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)	FUNDING REQUESTED IN FY 1988 BUDGET FTE \$ (000s)	FTE \$ (000s)	
NATIONAL ZOOLOGICAL PARK						
GENETIC RESEARCH						
Senior Researcher	1	1.0	51	1.0	51	
Technician	1	1.0	25	1.0	25	
SUPPORT FOR CURRENT PROGRAMS						
Animal Keepers (Reptile)	2	2.0	40	2.0	40	
Animal Keepers (existing facilities)	2	2.0	40	2.0	40	
Animal Keepers (Conservation Research Ctr)	3	3.0	60	3.0	60	
Water Quality Specialists	2	2.0	58	2.0	58	
Subtotal	11	11	274	11.0	274	
SI LIBRARIES						
Library Technicians	2	2.0	32	2.0	32	

TABLE A

Page 3
ADDITIONAL FUNDS TO BE
REQUIRED TO FULLY-FUND
POSITION IN FUTURE YEARS
FTE \$ (000s)

SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET
4/1/1987

BUREAU/ POSITION TITLE	# of FTE Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)	FUNDING REQUESTED FY 1988 FTE \$ (000s)	ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS FTE \$ (000s)
NATIONAL MUSEUM OF NATURAL HISTORY					
MOLECULAR SYSTEMATICS LAB					
Scientist/Lab Supervisor	1	1.0	44	1.0	44
Scientist	1	1.0	37	1.0	37
Technicians	2	2.0	50	2.0	50
ARCTIC ARCHEOLOGY, ANTHROPOLOGY, & BIOLOGY					
Scientist	1	1.0	31	1.0	31
Technician	1	1.0	25	1.0	25
Administrative Assistant	1	1.0	21	1.0	21
COMPUTER MAINTENANCE					
Computer Equipment Technician	1	1.0	21	1.0	21
COLLECTIONS MANAGEMENT					
Museum Technicians	1	1.0	21	1.0	21
COLUMBUS QUINCENTENARY PROGRAMS					
Program Manager	6	6.0	121	6.0	121
Subtotal	1	1.0	39	1.0	39
	15	15.0	389	15.0	389
NATIONAL AIR AND SPACE MUSEUM					
COLUMBUS QUINCENTENARY PROGRAMS					
Project Coordinator	1	1.0	25	1.0	25

TABLE A
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SMITHSONIAN INSTITUTION NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET 4/1/1987				FUNDING REQUESTED IN FY 1988 BUDGET FTE \$ (000s)		ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS FTE \$ (000s)	
BUREAU/ POSITION TITLE	# of FTP Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)				

NATIONAL MUSEUM OF AMERICAN HISTORY							

IMPLEMENTATION OF NMNH MASTER PLAN							
Museum Technicians	6	6.0	102		6.0	102	
COLLECTIONS INVENTORY SUPPORT							
Museum Technicians	2	2.0	42		2.0	42	
Museum Technicians	3	3.0	51		3.0	51	
COLUMBUS QUINCENTENARY PROGRAMS							
Historian	1	1.0	37		1.0	37	
CENTER FOR THE STUDY OF AMERICAN HISTORY							
Director (Study Center)	1	1.0	44		1.0	44	
Secretary	1	1.0	17		1.0	17	
Subtotal	14	14.0	293		14.0	293	

NATIONAL PORTRAIT GALLERY							

CONSERVATION							
Conservator	1	1.0	25		1.0	25	
CONSTITUTION BICENTENNIAL							
Conservator (temp. pos.)	0	1.0	25		1.0	25	
Registrar Technician (temp. pos.)	0	1.0	17		1.0	17	
Subtotal	1	3.0	67		3.0	67	

HIRSHHORN MUSEUM AND SCULPTURE GARDEN							

COLUMBUS QUINCENTENARY PROGRAMS							
Exhibition Asst. (temp. pt.time position)	0	0.5	10		0.5	10	

TABLE A

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SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET
4/1/1987

BUREAU/ POSITION TITLE		# of FTP Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)	FUNDING REQUESTED IN		ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS
					FY 1988 FTE \$ (000s)	BUDGET FTE \$ (000s)	FTE \$ (000s)
CENTER FOR ASIAN ART - SACKLER GALLERY							
Assistant Curator (Research)		1	1.0	31	1.0	31	
Curatorial Secretary		1	1.0	19	1.0	19	
Public Affairs Asst.		1	1.0	19	1.0	19	
Editorial Asst.		1	1.0	19	1.0	19	
Silk-Screen Specialist		1	1.0	25	1.0	25	
Subtotal		5	5.0	113	5.0	113	
NATIONAL MUSEUM OF AFRICAN ART							
Asst. Curator		1	1.0	25	1.0	25	
Computer Specialist		1	1.0	25	1.0	25	
Subtotal		2	2.0	50	2.0	50	
OFFICE OF EXHIBITS CENTRAL							
Exhibits Specialist		1	1.0	25	1.0	25	
TRAVELING EXHIBITION SERVICE							
Secretary/Receptionist		1	1.0	17	1.0	17	
Secretary		1	1.0	17	1.0	17	
Subtotal		2	2.0	34	2.0	34	

TABLE A
Page 6
ADDITIONAL FUNDS TO BE
REQUIRED TO FULLY-FUND
POSITION IN FUTURE YEARS
FTE \$ (000s)

SMITHSONIAN INSTITUTION
NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET
4/1/1987

BUREAU/ POSITION TITLE	# of FTP Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)	FUNDING REQUESTED IN FY 1988 BUDGET FTE \$ (000s)	ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS FTE \$ (000s)
NATIONAL SCIENCE RESOURCES CENTER					
Administrative Assistant	1	1.0	25	1.0	25
ADMINISTRATION					
* OFFICE OF ACCOUNTING & FIN. SVCS. Accounting Technician (Quad ASC)	1	1.0	15	1.0	15
* OFFICE OF PERSONNEL ADMINISTRATION Personnel Management Specialist Personnel Clerk	1 1	1.0 1.0	37 19	1.0 1.0	37 19
* DIR. OF FACILITIES SERVICES Facilities Planner Secretary	1 1	1.0 1.0	61 17	1.0 1.0	61 17
* OFFICE OF ENVIRONMENTAL MGMT & SAFETY Safety Specialist Industrial Hygienist Technician Fire Protection Engineer Safety Specialist/Industrial Hygienist Administrative Officer	1 1 1 1 1 1	1.0 1.0 1.0 1.0 1.0 1.0	31 37 17 37 37 37	1.0 1.0 1.0 1.0 1.0 1.0	31 37 17 37 37 37
* OFFICE OF PROCUREMENT & PROPERTY MGMT. Manager, Contracts & Procurement Manager, Admin., Prog. Analysis & Prop. Mgmt	1 1	1.0 1.0	51 51	1.0 1.0	51 51
Subtotal	13	13.0	447	13.0	447

SMITHSONIAN INSTITUTION NEW POSITIONS REQUESTED IN THE FY 1988 CONGRESSIONAL BUDGET 4/1/1987					TABLE A Page 7		ADDITIONAL FUNDS TO BE REQUIRED TO FULLY-FUND POSITION IN FUTURE YEARS	
BUREAU/ POSITION TITLE	# of FTP Pos.	FULL YEAR COST FTE \$ (000s)	LAPSE RATE (if appl.)	FUNDING REQUESTED IN FY 1988 BUDGET FTE \$ (000s)			FTE \$ (000s)	
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OFFICE OF PROTECTION SERVICES								

Gallery Guards	11	11.0	165	11.0	165			
OFFICE OF HORTICULTURE								

Gardener	1	1.0	23	1.0	23			
TOTAL NEW POSITIONS REQUESTED FOR FY 1988	110	112.5	2,537	101.5	2,383	11.0	154	

TABLE B

SMITHSONIAN INSTITUTION
FUNDING REQUIREMENTS FOR ANNUALIZATION OF FY 1987 QUADRANGLE-RELATED POSITIONS IN THE FY 1988 BUDGET
4/1/1987

BUREAU/ POSITION TITLE	# of Pos.	FULL YEAR COST FTE \$ (000s)	FY 1987 BUDGET FTE \$ (000s)	FY 1988 BUDGET FTE \$ (000s)
NATIONAL MUSEUM OF AFRICAN ART				
Education Specialist	1	1.0	0.75	19
Other delayed hires of FY 1987 Pos. (restoration of luep sua reduction)	0	3.0	90	0.25
Subtotal	1	4.0	115	3.00
			19	3.25
				96
OFFICE OF EXHIBITS CENTRAL				
Exhibits Specialists	2	2.0	50	1.60
			40	0.40
				10
OFFICE OF PROTECTION SERVICES				
Gallery Guards	17	17.0	255	4.25
Nurse	1	1.0	25	0.35
Subtotal	18	18.0	280	4.60
			73	12.75
				0.65
				16
				207
OFFICE OF PLANT SERVICES				
Trade & Craft Mechanics	3	3.0	93	1.50
Mail Clerk	1	1.0	15	0.50
Subtotal	4	4.0	108	2.00
			54	1.50
				0.50
				8
				54
QUADRANGLE BUILDING MANAGER				
Custodians	2	2.0	28	1.00
Custodial Workers	9	9.0	134	7.00
Painter	1	1.0	24	0.50
Lampist	1	1.0	16	0.50
Clerk/typist	1	1.0	15	0.50
Electrician helper	1	1.0	18	0.50
Subtotal	15	15.0	235	10.00
			144	5.00
				91
TOTAL FUNDING REQUIRED				
	40	43.0	788	18.95
			330	24.05
				458

Conversion of Multiple Mirror Telescope

Question: P. 32. Included in the requested increase is \$525,000 for converting the Multiple Mirror Telescope in Arizona from six mirrors to a single mirror. It is indicated that the total cost will be \$10 million, to be completed by approximately 1992. Will any of these costs be shared? If so, how much and with whom?

Answer: On page 32 of the Smithsonian Institution's January 1987 submission to Congress on the FY 1988 budget, it is indicated on line 27 that the total cost to the Smithsonian (*italics added*) would be \$10 million. (Unfortunately, in the corresponding statement on page 33, line 34, the word "Smithsonian" was inadvertently omitted.)

The conversion project is planned to be a cooperative one with the University of Arizona, as was the original construction of the MMT. Arizona's main contribution will be in casting and polishing the larger mirror. To this end, the University has already invested approximately \$5 million in a major mirror-casting facility and about \$0.5 million in the development of polishing techniques for the large mirrors. The University is currently seeking an additional \$3 million to build a mirror-polishing facility based on this development, and is also supporting nearly \$0.75 million in annual costs for this mirror facility. (After casting and polishing the proposed 6.5-meter-diameter mirror for the MMT, this facility will be utilized for the production of even larger mirrors, up to 8 meters in diameter.)

Question: If this conversion is not funded, will the MMT in its current configuration still be of use? For how long?

Answer: The MMT in its present configuration would be of use indefinitely. To give an extreme example, a slide rule is still a useful computational device and may continue to be so indefinitely. But scientists equipped only with slide rules cannot expect to compete appropriately with those using modern computers. For analogous reasons, we need to convert the MMT; otherwise it may cease to be a forefront facility by the mid to late 1990's. (See, also, answer to the following question.)

Question: Will the capabilities of the converted MMT be duplicated at any other telescopes, including those now planned and discussed in your justification?

Answer: The converted MMT would be a pioneering instrument in that it would be the first of a class of unprecedentedly large single-mirror optical telescopes. Other, larger, single-mirror telescopes, for other institutions, are planned to follow the conversion of the MMT. These telescopes should exceed the capabilities of the converted MMT. However, the converted MMT would have a nearly unique capability for a significant period of time, perhaps for as long as five years. With all the uncertainties attendant on such a major technological advance as is required for these telescopes, it is difficult to provide a reliable quantitative statement on time scales.

Question: The budget indicates you want to order the raw glass by this summer (1987) because of long lead times. This would involve spending \$535,000, including \$250,000 of Trust funds. Do you plan to submit a formal reprogramming request to seek the House and Senate Committee's approval to use the balance of the funds (\$285,000) for this purpose?

Answer: We do not now plan to submit a reprogramming request. (See, however, response to the following question.)

Question: What is the source of the \$285,000, and what was it originally intended to be used for?

Answer: The \$285,000 came from (1) endowment Trust funds already allocated to SAO for special research projects; and (2) funds from a contract SAO already has with the University of Arizona for modification of the MMT for a closely related purpose. However, the \$535,000 total may prove insufficient for the intended purchases: the only proven supplier of glass of the type required is Japanese and the cost will likely exceed significantly our original estimate, due in large part to the recent sharp decrease in the value of the dollar relative to that of the yen. The glass from a possible American supplier is currently under evaluation; a cost estimate for this glass is not yet available. When reliable cost estimates for the glass become available, we may have to reevaluate the funding situation.

Question: Will you be providing additional Trust funds for this project, if it is approved? If so, how much?

Answer: At this time, the Institution has no specific plans for contributing additional Trust funds to the MMT conversion project.

Changes in Nonappropriated Funding for SAO

Question: What is the basis for projecting a large increase in your Fellowships and Visiting Scientists program (from \$430,000 in 1987 to \$500,000 in 1988)?

Answer: This projection is based primarily on the expectation of an expansion in SAO's new Predoctoral Fellowship Program. This new program has been very successful, but the number of students currently being supported is far too small to meet the need of SAO scientists. Participation in this program of students from around the world also allows SAO to address the Institution's interest in increasing its international programs. A small part of the projected increase is based on the need to cover the effect of inflation on the stipends and research expenses for SAO's Postdoctoral and Visiting Scientist programs.

Question: What is the impact of the major decrease in NASA funding on your program (from \$14.3 million to \$11 million estimated for 1988)?

Answer: This possible decrease in funding could result in a reduction in Trust fund staff of about 10%. The research projects that would be most affected by this decrease are in the High Energy Astrophysics, the Optical and

Infrared Astronomy, and the Radio and Geoastronomy divisions. This projection is, of course, only an estimate and could be affected significantly by relatively small changes in NASA policy and by possible opportunities to participate, for example, in European space missions.

Molecular Evolutionary Studies at STRI

Question: P. 35. The request for the Smithsonian Tropical Research Institute is \$5,711,000, an increase of \$1,589,000. Included in the increase is \$800,000 (and 6 workyears) proposed to be redirected from the former Rockville facility, for a new effort in molecular evolutionary studies. How many laboratories will be provided for this effort, and where will they be? How long will it take to equip these laboratories? Why is more than one needed?

Answer: Five laboratories will be equipped with these funds: one at NAOS Island Marine Laboratory and four at the Tupper Research Center. It is anticipated that four of these laboratories will be equipped during FY 1988 and the fifth during FY 1989. Each laboratory requires the specialized equipment needed for the different major areas of research in plant physiology (such as soil plant water relations, photobiology, and nutrient balance) and molecular evolution such as DNA-DNA hybridization and isozyme analysis). These new laboratories, combined with the expertise of STRI's existing staff and proposed new staff, will equip STRI to address a variety of research questions.

Question: Will the 6 positions requested be the total staffing required for this effort?

Answer: An additional position for a technician will be requested in FY 1989 in order to provide the necessary maintenance and support for the laboratories which will use biochemicals and radioactive materials. The funding required for this position will be offset by the reduction of one-time FY 1988 funds for equipment purchases and start-up costs.

Question: What will the \$150,000 for contractual services be used for?

Answer: The contractual services of experts will be required to help us set-up the program and laboratories and for the maintenance and repairs of the sophisticated equipment needed of these research efforts. In addition, some technical laboratory service will be performed by contract personnel where it proves to be more cost effective than employing full time persons.

Question: How much of the \$800,000 request represents one-time only needs?

Answer: None of the \$800,000 represents "one-time only" costs. The first two years of the effort will involve major expenses to equip the laboratories with a small proportion of the funds used for the personnel costs, fellowships, supplies and travel. In subsequent years, the funds used for the initial outlay for equipment will become the operating budget for the program, to purchase supplies, maintain equipment.

Question: \$135,000 is included for postdoctoral fellowships. How many such fellowships would be funded, for what length of time, and with what stipend?

Answer: The long-term fellowship programs envisioned here will include five 3-year fellows with annual stipends of \$20,000 each and individual allotments for travel to Panama or other tropical field sites of \$1,000 and \$4,000 for research supplies (chemicals, glassware, etc.) that are required for these sophisticated research efforts. An additional \$10,000 is required to administer the program, including advertising and interview costs to insure that the best candidates are found after open searches.

Question: Why are these proposed for Federal funding? How many other fellowships at STRI, or in the Smithsonian overall, are Federally funded?

Answer: Consistent with Smithsonian practice, fellowships are offered with Federal funds when they are directly related to research programs that require a much closer integration with specific programmatic objectives, rather than the independent activities of our regular Trust funded pre- and post-doctoral fellows. A few additional fellowships are Federally funded consistent with the above mentioned practice, such as one fellowship at STRI and the Conservation Analytical Laboratory.

Tropical Biology Research at STRI

Question: Last year, \$200,000 was provided for a tropical biology research initiative. How are those funds being used in 1987, compared with the elements of the original request of \$345,000; and how do you propose to use them in 1988?

Answer: After a careful analysis of the highest priorities from our much larger budget request, (\$345,000), we have allocated the \$200,000 funds from this initiative to the following item:

	<u>1987</u>	<u>1988</u>
Plant physiology	\$18	\$18
Contractual services for three demographic studies	76	79
Biochemical evolution	31	0
Demographic studies	42	60
Insect field studies & collection development	23	33
Travel	10	10
Total	<u>\$200</u>	<u>\$200</u>

STRI - Tupper Laboratory and Conference Center

Question: The request includes 8 workyears and \$567,000 for the Tupper Laboratory and Conference Center. When will the construction be complete? At this point, how will the actual construction cost compare to the original estimate?

Answer: The construction contract, signed on March 23, 1987, calls for construction of the Tupper Center to be completed by September 1988. (Partial-year funding is requested in FY 1988 for Tupper Center staffing to allow these positions to be hired and trained prior to the beginning of the relocation of program activities and operations to the new facility.) The total available funding for the project is \$6.78 million: an amount of \$4 million donated by the family of Earl S. Tupper and \$2.78 million in Federal funds appropriated in FY 1987.

The current construction cost estimate, based on the contract, will be within available funding. The construction contract cost of \$5,677,322 will cover the construction, site preparation, escalation, and the purchase and installation of fixed equipment. Design and construction management costs are estimated at \$720,000, leaving a balance of \$382,678 for construction contingency costs.

Question: How does the current estimate of \$736,000 to complete the furnishing compare to last year's estimate of \$970,000?

Answer: The original line item estimate of equipment and furnishings for this project (\$970,000) included a number of items which are built into the structure, such as air conditioning and an emergency generator, and which are now included in the construction costs. Moreover, the current estimate of \$736,000 for equipment and furnishings is based on a more recent refined analysis of needs for the new building rather than the original estimate developed in the conceptual stage.

Question: What exactly will the \$460,000 requested in 1988 be used for?

Answer: The \$460,000 requested in FY 1988 will be used to purchase some essential office and laboratory equipment as follows:

Health, Safety and Animal Care Equipment	\$ 30,000
Specimen and Collection Storage Cases	25,000
Computer Equipment	217,000
Research Equipment	40,000
Maintenance and Shop Equipment	26,000
Furnishings	<u>122,000</u>
Total:	\$ 460,000

Question: If you request the same amount in 1989, the total will be \$920,000, compared to the \$736,000 estimated requirement. Explain.

Answer: In FY 1989, \$276,000 of the \$460,000 will be needed to complete the purchase of furnishings and equipment of the Tupper Center. A further amount of \$154,000 will be required to annualize the partial-year funding of the 22 positions requested in the FY 1988 budget to staff the Tupper Center, BCI and Gamboa facilities. It is anticipated that STRI will request that the balance be retained to provide an expanded base for STRI's equipment replacement and acquisition program.

Question: How many positions will be transferred to the new facility from within STRI?

Answer: More than 18 current STRI scientific and support staff, along with several field researchers on contract, will move to space in the Tupper Center during the relocation of specific offices to the new facility, including the Education and Conservation Office and Procurement Department. The additional positions requested in FY 1988 are to provide essential building maintenance and plant services directly associated with the building, as well as to provide essential program and administrative support not available with the existing staff.

Question: Explain why both a supply clerk and a procurement clerk will be needed?

Answer: Existing personnel is insufficient to meet the procurement needs of STRI. A procurement clerk will process purchase orders for equipment and supplies required throughout the Institute while the supply clerk will issue expendable supplies to appropriate staff and visitors, insure proper billing for those items, keep track of inventories and insure proper return of equipment that is checked out. It has been recommended by auditors that STRI establish an annual procurement plan and centralized supply room. It has not been possible thus far because of a lack of space in existing facilities. The new building will give us the space but the additional personnel requested are necessary to provide the services involved.

New STRI Facilities at BCI and Gamboa

Question: 3 Workyears and \$144,000 are requested for new facilities at BCI and Gamboa. What amount of existing furnishings will be available for use at both locations?

Answer: While some of the furnishings and appliances presently available in rented STRI housing in Gamboa and at BCI facilities can be moved to the new facilities, most of the furniture was obtained as surplus from the U.S. Department of Defense and has outlived its useful life.

Question: What is the existing staff at both locations, by position?

Answer: STRI does not have any personnel currently assigned exclusively to Gamboa but to protect the long-term serviceability of the new dorm a new main-

tenance/janitorial position is needed. On BCI, the present kitchen and janitorial/maintenance staff consists of: facility manager (1), maintenance helper (1), maintenance worker (1), custodial worker (1), cooks (2), assistant cook (1). The requested positions are necessary to provide essential services in the new facilities.

Question: Do you still expect both facilities to be completed by the end of FY 1987?

Answer: The Gamboa dorm renovation will be completed by September 1987 and the BCI kitchen/dining/dormitory facilities will be completed during FY 1988.

Changes in Nonappropriated Funding for STRI

Question: Are funds provided from nonappropriated sources of funding planned to increase in FY 1988 commensurate with the proposed increases in Federal funding? If necessary, provide the 1987 and 1988 figures for the record.

Answer: STRI's basic sources of nonappropriated funds are derived from Institutional unrestricted funds, restricted gifts, and grant and contract activity. Smithsonian support provided through unrestricted general and special purpose funds will increase from \$496,000 to an estimated \$518,000 in FY 1988. Funding provided by external sources such as restricted funds and Federal grants and contracts are dependent on factors outside the control of the Institution and may vary from year to year. For FY 1988, funding from restricted funds is expected to decrease from \$593,000 to \$412,000, primarily as the result of the termination of the two research projects described in the answer to the next question. Funding from Federal grants and contracts is projected to increase from \$573,000 in FY 1987 to \$591,000.

Question: Why are the foundation funds supporting the iguana and paca projects projected to decrease by about half in 1988 (from \$315,000 to \$164,000)?

Answer: The decrease in the expenditures estimated for the iguana and paca projects in FY 1988 reflects the ending of current funding for these projects at the termination of the five-year study period.

Future of SERC - Rockville Facility

Question: P. 44. The request for the Smithsonian Environmental Research Center is \$1,376,000, a decrease of \$1,577,000. This reflects the redirection of the Rockville research funding to other programs, such as STRI. What is the disposition of the Rockville facility itself, which was under a long term lease?

Answer: The top floor of this two-story building has been sub-leased to Georgetown University for the balance of the Smithsonian's lease period which ends on January 31, 1990. The ground floor will be used primarily by the Museum of American History for the storage of collections while repair and renovation work is being done in the Museum's building.

Hospital Equipment for the National Zoo

Questions: P. 48 The request for the National Zoo is \$13,176,000, an increase of \$924,000. Will the \$200,000 added on in FY 1987 for medical and surgical equipment for the new hospital be needed also in 1988? If so, what is the total estimated cost of your equipment needs for the new hospital?

Answer: The \$200,000 added in FY 1987 represented one-half of the funds needed for hospital equipment. The funds will be needed in FY 1988 to purchase the balance of the equipment for the hospital. For FY 1989 and following years, it is anticipated that the Zoo will request that this funding be retained to establish a veterinary equipment replacement and acquisition program for the Zoo.

Like medical technology, the veterinary technology is advancing in quantum leaps. Compared to the high costs of human medical equipment, an annual equipment budget of \$200,000 for veterinary equipment is modest. It would allow the Zoo to eventually approach state-of-the-art animal care by adding modules to basic equipment acquired in FY 1987 and FY 1988. As an illustration, the purchase of a state-of-the-art X-ray machine alone would cost more than the first two years' budgets (\$400,000).

Genetics Research at the Zoo

Question: 2 workyears and \$250,000 is included for a genetics program for rare and endangered species. Where will you establish the genetics laboratory included in this program? What is the total estimated cost?

Answer: The lab will be located in the new Rock Creek hospital or the renovated Research Facility which ever will provide the most effective use of space. The annual operating costs for the lab would be \$250,000 to \$300,000.

Question: How much of the requested increase represents one-time costs only?

Answer: Approximately \$121,000 would be used in FY 1988 to purchase equipment which represents one-time costs. In FY 1989 and following years, this funding would be used to establish a base for equipment purchase and replacement and laboratory supplies for this program.

Question: How much of the increase of \$174,000 is for supplies and equipment, and how much for the exchange program? Explain what the latter involves, and what the costs will provide.

Answer: An amount of \$43,000 will be used to support the exchange program. The remaining \$131,000 will be used for the purchase of supplies and equipment. The exchange program monies will provide necessary funds to consult with recognized experts in specific disciplines within the program to insure that the goals of the genetics lab are met.

Question: Will this capability be duplicative of such capabilities elsewhere? If so, why should this program be initiated at the National Zoo?

Answer: The program is a cooperative and synergetic program within each of three Smithsonian Bureaus working within their specialized disciplines. It will not be duplicative since NZP has already established a unique leadership role in applying molecular techniques to the study of those genetics problems that have an immediate relevance to the conservation of endangered species.

Current Zoo Programs

Question: 9 workyears and \$382,000 is included for support for current programs. What are your plans for the new facilities such as the Gibbon Facility, and the Amazon/Orinoco River exhibit? When will they be available?

Answer: The Gibbon Facility is presently under construction and will open to the public this summer (June/July 1987). This facility will exhibit a family of gibbons in a special enclosure to allow them to behave as natural as possible in captivity.

The Amazon/Orinoco River Exhibit is presently under design. Actual construction is programmed for FY 1989, with completion scheduled for the summer of 1990. This exhibit will be a greenhouse enclosure replica of a tropical river forest, specifically planned to duplicate a portion of the Amazon/Orinoco river forest. The exhibit will feature a variety of fauna and flora from that habitat with particular emphasis on aquatic animals of all kinds.

Question: How exactly was the \$150,000 added on in FY 1987 by Congress for keepers and necessary supplies and equipment used?

Answer: Of the \$150,000 added on in FY 1987 by Congress for Animal keepers and support, the NZP programmed \$60,000 for the three Animal keeper positions, Two of the positions were assigned to the Invertebrate exhibit and the remaining keeper position was assigned to the mammal unit at the Conservation Center at Front Royal. The remaining \$90,000 will be used during FY 1987 to purchase supplies and materials for the animal departments (including the Invertebrate exhibit) and other units at the Zoo.

Question: Which are the exhibits for which the two additional positions are requested, in lieu of current personnel working overtime? How much savings from avoiding overtime is expected? Are these savings reflected in your request?

Answer: The two keeper positions will be used in the Zoo's mammals department, including the Beaver Valley exhibits, Great Ape House, Small Mammal House, Monkey Island and hoofed stock exhibits. It is anticipated that as much as \$10,000 in total overtime costs can be saved with the two additional keepers. Last year \$10,000 had to be provided for overtime costs, on an emergency basis, by cutting other areas of the NZP budget. The two additional positions will also greatly improve safety conditions for the Zoo's animal keepers since there are increased health and safety concerns when keepers are assigned to work with animals and in facilities that they are unfamiliar with. This request will go a long way to correct this problem. The total request does reflect and adjust for the reduced overtime.

Question: What are the current numbers of keeper positions at both Rock Creek Park and Front Royal? How do your staffing patterns compare with other zoos of comparable size?

Answer: The Zoo has 81 animal keepers on the staff, with 63 at Rock Creek and 18 keepers at Front Royal. In a preliminary study of staffing patterns at other zoos, initial information shows that the National Zoo compares favorably with zoos of comparable size. However, more detailed consideration of acreage, number of animals and number of species must be included to produce a more valid comparison.

Question: When do you expect to bring back the polar bears?

Answer: Polar Bears and Penguins are being considered as exhibits for the second phase of the aquatics exhibits development. We should not bring back Polar Bears to the National Zoo until we have an exhibit in the right location and with the right shade considerations to provide comfortable conditions for Arctic animals in the Washington summer climate.

Question: When will the new aquatic facilities be on line for which the two water quality specialist positions are requested?

Answer: The new aquatic facilities are programmed for construction in FY 1989/90. It is imperative to have these positions aboard during the design phase (FY 1988) to begin training and provide design review of the life support system which provides the water quality to the facility. It is too late to begin this process after the animals are in the exhibits.

Question: Why is an increase of \$184,000, or 52% needed for maintenance (purchase of supplies and materials)?

Answer: As the facilities continue to age (some of the Zoo exhibits date back to the thirties) more materials are needed for minor repair and routine maintenance. Also new facilities, both at Rock creek and Front Royal have been on line for a few years and they now call for minor repair/maintenance due to normal wear and tear and the heavy use of the exhibit facilities by our public.

The requested increase of \$184,000 is vital to continue the necessary level of maintenance support for both animal and public areas of the Zoo.

Question: How does the increase in restricted funds for research programs on exotic animals and new reproductive techniques (\$525,000, compared to \$285,000) relate to the requested increase for the genetics management program?

Answer: These are complementary and interactive programs. We are devoting a great deal of attention to cryopreservation of sperm and embryos as a means of saving endangered species and the reproductive technique program needs to be greatly expanded to cope with escalating problems of conservation. Genetic studies will enhance the choice of species for this program and captive breeding programs.

Research Material Provided by Smithsonian Archives

Question: P. 56. The request for the SI Archives is \$579,000, an increase of \$15,000. You note that more than 27,000 pages of copy from archival holdings were provided to researchers free of charge in FY 1985. Would it be possible to charge enough to recover your costs in providing this material? Have you considered doing so?

Answer: The SI Archives has considered setting up a separate copier dedicated solely to researcher copying, but found that there would be insufficient income generated from the copying to pay for purchase and maintenance of a separate machine.

Cataloging of Uncatalogued Material in the Smithsonian Libraries

Question: P. 59. The request for the SI Libraries is \$5,039,000, an increase of \$141,000. An increase of \$200,000 is requested to accelerate the cataloging of uncatalogued materials. Will all of this effort be accomplished by contract? Is this less expensive than using your own staff?

Answer: Yes, this cataloging work will be done by contract with the support of SIL staff, who will do preparation and quality control work. The direct per item cost is comparable, but in-house work would require hiring, training, and supporting several additional staff members. Present space limitations would make it very difficult to find the space for work stations and a staging area for materials in process.

Question: P. 59. Why is it so expensive to catalog trade catalogs, i.e., seed catalogs, etc. (\$4 an item)?

Answer: The cataloging process for trade catalogs includes the following: identifying and keying into the SI Libraries in-house online cataloging system about 18 data elements, such as title, language, name of manufacturer, places of manufacturer, date of publication, provenance, subject, etc. Some data elements, such as subject, need to be checked in subject heading lists for correct terminology. Sometimes dictionaries need to be consulted to identify the subject matter.

Each piece is also examined for preservation needs and delicate items are placed in acid-free envelopes for protection. The piece and the envelope are marked with location symbol and accession number.

The above method was developed by the Libraries as a cost effective way to provide bibliographic control to the trade literature collection. The traditional method, used universally for cataloging books, (and trade literature by other libraries) would cost approximately \$20 per item. The low cost of this cataloging process developed by the Libraries (\$4 per item) is achieved by creating a bibliographic record that is below the standards required by national data bases and by extensive use of volunteer help.

Quadrangle-related Positions

Question: There is also a request, originally made in 1987, for 2 workyears and \$32,000 for the African Art branch library. For all the increases

and workyears requested for the Quadrangle, provide a list showing, by location, positions funded to date, positions requested in this budget, and any future year requests expected at this time.

Answer: The following table provides the requested information on Quadrangle-related positions funded through FY 1987 and others requested for FY 1988. If the positions requested for FY 1988 are approved, the initial staffing requirements for Quadrangle-related program and support needs will be met. For FY 1989 and following years, any additional positions requested by the individual bureaus will be based on the staffing requirements related to future program growth. At this time, it is anticipated that the Sackler Gallery will request 4 positions from FY 1989 through FY 1992 for conservation, education, and exhibition support and that the National Museum of African Art will request 3 positions in FY 1989 and FY 1990 for conservation and publications support. Future Quadrangle-related facilities management needs are currently expected to include 3 positions for Quadrangle Building Management in FY 1989 and FY 1990 and 1 gardener for the Office of Horticulture in FY 1990. It is possible that other staffing needs will be identified during the review of program needs by each bureau following the initial period of full operation of the Quadrangle.

QUADRANGLE STAFFING REQUIREMENTS BY BUREAU, FY 1984 - FY 1988

BUREAU/FISCAL YEAR POSITION TITLE	# of Pos.	FULL YEAR FUNDING FTE	\$ (000s)

CENTER FOR ASIAN ART - SACKLER GALLERY			

APPROVED IN THE FY 1984 APPROPRIATION			
Asst. Director	1	1.0	53
APPROVED IN THE FY 1985 APPROPRIATION			
Registration Specialist	1	1.0	34
Conservators	2	2.0	67
Conservation Specialist	1	1.0	32
Exhibit Designer	1	1.0	52
Curator	1	1.0	44
Secretary	1	1.0	22
Library Technician	1	1.0	28
APPROVED IN THE FY 1986 APPROPRIATION			
Graphics Designer	1	1.0	36
Woodcrafter	1	1.0	25
Carpenter	1	1.0	22
Painter's Asst.	1	1.0	19
Exhibitions Designer	1	1.0	50
Photographer	1	1.0	20
Conservation Technician	1	1.0	20
Asst. Curator	1	1.0	30
Curatorial Secretary	1	1.0	16
Registration Secretary	1	1.0	16
Oriental Art Restoration Spec.	1	1.0	25
Public Affairs Specialist	1	1.0	42
Editor	1	1.0	42
Education Specialist	1	1.0	25
Library Aide	1	1.0	16
Accounting Technician	1	1.0	20
Secretary	1	1.0	20
APPROVED IN THE FY 1987 APPROPRIATION			
Photographic Technician/Secretary	1	1.0	16
Museum Technicians	3	3.0	56
Graphics Technician	1	1.0	20
Slide and Photographic Librarian	1	1.0	16
Woodcrafter Asst.	1	1.0	19
REQUESTED IN THE FY 1988 BUDGET			
Assistant Curator (Research)	1	1.0	31
Curatorial Secretary	1	1.0	19
Public Affairs Asst.	1	1.0	19
Editorial Asst.	1	1.0	19
Silk-Screen Specialist	1	1.0	25
TOTAL QUADRANGLE-RELATED STAFFING FOR SACKLER GALLERY	38	38.0	1,016

QUADRANGLE STAFFING REQUIREMENTS BY BUREAU, FY 1984 - FY 1988

BUREAU/FISCAL YEAR POSITION TITLE	# of Pos.	FULL YEAR FUNDING FTE	\$ (000s)
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NATIONAL MUSEUM OF AFRICAN ART -----			
APPROVED IN THE FY 1985 APPROPRIATION			
Asst. Registrar	1	1.0	20
Clerk/typist	1	1.0	15
Chief Conservator	1	1.0	27
Curatorial Asst.	1	1.0	22
Exhibit Designer	1	1.0	32
APPROVED IN THE FY 1986 APPROPRIATION			
Writer/Editor	1	1.0	25
Graphic Designer	1	1.0	25
Exhibit Production Asst.	1	1.0	16
Carpenter	1	1.0	22
Shop Foreman	1	1.0	24
Photographer	1	1.0	30
Museum Technicians (2 temp. pos)	2	2.0	32
Education Specialist	1	1.0	30
Docent/Intern Coordinator	1	1.0	25
Curator (Research)	1	1.0	50
Secretary	1	1.0	16
Administrative Asst.	1	1.0	16
Clerk/typist	1	1.0	16
APPROVED IN THE FY 1987 APPROPRIATION			
Carpenter	1	1.0	24
Packer	1	1.0	19
Graphic Production Asst.	1	1.0	20
Exhibition Design Asst.	1	1.0	25
Art Handler	1	1.0	19
Painter	1	1.0	22
Secretary	1	1.0	20
Education Specialist	1	1.0	25
REQUESTED IN THE FY 1988 BUDGET			
Asst. Curator	1	1.0	25
Computer Specialist	1	1.0	25
TOTAL QUADRANGLE-RELATED STAFFING FOR MUSEUM OF AFRICAN ART			
	29	29.0	667

QUADRANGLE STAFFING REQUIREMENTS BY BUREAU, FY 1984 - FY 1988

BUREAU/FISCAL YEAR POSITION TITLE -----	# of Pos. -----	FULL YEAR FUNDING FTE ---	\$ (000s) -----
SI LIBRARIES -----			
APPROVED IN THE FY 1985 APPROPRIATION Library Asst.	1	1.0	28
REQUESTED IN THE FY 1988 BUDGET Library Technicians	2	2.0	32
TOTAL QUADRANGLE-RELATED STAFFING FOR SI LIBRARIES	3	3.0	60
OFFICE OF EXHIBITS CENTRAL -----			
APPROVED IN THE FY 1986 APPROPRIATION Exhibit Specialist	1	1.0	30
APPROVED IN THE FY 1987 APPROPRIATION Exhibits Specialists	2	2.0	50
REQUESTED IN THE FY 1988 BUDGET Exhibits Specialist	1	1.0	25
TOTAL QUADRANGLE-RELATED STAFFING FOR OFFICE OF EXHIBITS CENTRAL	4	4.0	105
TRAVELING EXHIBITION SERVICE -----			
APPROVED IN THE FY 1986 APPROPRIATION Graphics Technician	1	1.0	25
Education Workshop Coordinator	1	1.0	30
Research Asst.	1	1.0	25
Asst. Registrar	1	1.0	25
Exhibit Coordinator	1	1.0	42
Asst. Registrar	1	1.0	25
APPROVED IN THE FY 1987 APPROPRIATION Scheduling Asst.	1	1.0	16
REQUESTED IN THE FY 1988 BUDGET Secretary/Receptionist	1	1.0	17
Secretary	1	1.0	17
TOTAL QUADRANGLE-RELATED STAFFING FOR SITES	9	9.0	222

QUADRANGLE STAFFING REQUIREMENTS BY BUREAU, FY 1984 - FY 1988

BUREAU/FISCAL YEAR POSITION TITLE -----	# of Pos. ----	FULL YEAR FUNDING FTE ---	\$ (000s) -----
DIR. OF INTERNATIONAL ACT. -----			
APPROVED IN THE FY 1986 APPROPRIATION			
Program Director (Int. Ctr.)	1	1.0	30
Education Specialist (Int. Ctr.)	1	1.0	25
TOTAL QUADRANGLE-RELATED STAFFING FOR DIR. OF INTERNATIONAL ACT.	2	2.0	55
ADMINISTRATION -----			
* OFFICE OF PERSONNEL ADMIN.			
APPROVED IN THE FY 1986 APPROPRIATION			
Personnel Assistants	2	2.0	40
* OFFICE OF ACCOUNTING & FIN. SVCS.			
REQUESTED IN THE FY 1988 BUDGET			
Accounting Technician (Quad ASC)	1	1.0	15
TOTAL QUADRANGLE-RELATED STAFFING FOR ADMINISTRATION	3	3.0	55
OFFICE OF PROTECTION SERVICES -----			
APPROVED IN THE FY 1986 APPROPRIATION			
Sergeants	4	4.0	80
Guards	28	28.0	448
Alarms Technician	1	1.0	25
Premium Pay for Quad Security Staff			77
APPROVED IN THE FY 1987 APPROPRIATION			
Museum Protection Officers	7	7.0	112
Gallery Guards	17	17.0	255
Nurse	1	1.0	25
Premium Pay for Quad Security Staff			32
REQUESTED IN THE FY 1988 BUDGET			
Gallery Guards	11	11.0	165
TOTAL QUADRANGLE-RELATED STAFFING FOR OFFICE OF PROTECTION SERVICES	69	69.0	1,219

QUADRANGLE STAFFING REQUIREMENTS BY BUREAU, FY 1984 - FY 1988

BUREAU/FISCAL YEAR POSITION TITLE	# of Pos.	FULL YEAR FUNDING FTE	\$ (000s)
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OFFICE OF PLANT SERVICES

APPROVED IN THE FY 1986 APPROPRIATION

Operating Engineers	9	9.0	225
Const./Maintenance Mechanics	2	2.0	60
Premium Pay for Oper. Engineers			5

APPROVED IN THE FY 1987 APPROPRIATION

Trade & Craft Mechanics	3	3.0	93
Mail Clerk	1	1.0	15

TOTAL QUADRANGLE-RELATED STAFFING
FOR OFFICE OF PLANT SERVICES

15	15.0	398
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OFFICE OF HORTICULTURE

APPROVED IN THE FY 1986 APPROPRIATION

Gardeners	2	2.0	40
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APPROVED IN THE FY 1987 APPROPRIATION

Gardeners	3	3.0	69
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REQUESTED IN THE FY 1988 BUDGET

Gardener	1	1.0	23
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TOTAL QUADRANGLE-RELATED STAFFING
FOR OFFICE OF HORTICULTURE

6	6.0	132
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QUADRANGLE STAFFING REQUIREMENTS BY BUREAU, FY 1984 - FY 1988

BUREAU/FISCAL YEAR POSITION TITLE -----	# of Pos. -----	FULL YEAR FUNDING FTE ---	\$ (000s) -----
QUADRANGLE BUILDING MANAGER -----			
APPROVED IN THE FY 1986 APPROPRIATION			
Facilities Manager	1	1.0	42
Supply Clerk	1	1.0	14
Shipping Clerk	1	1.0	16
Clerk/typist	1	1.0	14
General Maintenance Foreman	1	1.0	28
Electrician	1	1.0	22
Maintenance Mechanics	2	2.0	44
Custodial Foreman	1	1.0	24
Custodial Leader	1	1.0	16
Custodial Workers	6	6.0	90
Labor Leader	1	1.0	18
Laborers	7	7.0	112
Forklift Operator	1	1.0	19
APPROVED IN THE FY 1987 APPROPRIATION			
Clerk/typist	2	2.0	30
Building Services Asst.	1	1.0	18
Custodians	2	2.0	28
Custodial Foreman	1	1.0	25
Custodial Workers	9	9.0	134
Painter	1	1.0	24
Lampist	1	1.0	16
Electrician helper	1	1.0	18
Custodial Leader	1	1.0	16
TOTAL QUADRANGLE-RELATED STAFFING			
FOR QUADRANGLE BLDG. MANAGEMENT	44	44.0	768
TOTAL SMITHSONIAN QUADRANGLE-RELATED STAFFING			
	222	222.0	4,697

Scientific Equipment at the NMNH

Question: P. 68. The request for the National Museum of Natural History is \$23,919,000, and increase of \$1,440,000. What were the actual expenditures in 1985 and 1986 under the program to upgrade and replace scientific equipment? How long do you expect this program, funded at \$400,000, to continue?

Answer: In FY 1985 NMNH expended \$245,297 of the 1985 increase of \$254,800 for research equipment, exclusive of scientific computing equipment for curatorial staff which totalled \$20,054. A major purchase was the replacement of one of the Museum's Scanning Electron Microscopes (\$104,770).

In FY 1986, only \$217,932 for non-computing research equipment and \$112,171 for scientific computing equipment was expended. Of the computer costs, \$11,500 was used to purchase a laser printer and software to produce camera ready manuscripts for publication. This will significantly reduce typesetting costs. Due to the GRH cut (\$911,000), the Museum was unable to dedicate the full \$392,400 appropriated for research equipment (\$260,000 less 2% across-the-board cut received in FY 1985, plus \$140,000 less .6% across-the-board cut received in FY 1986). Scientists, especially younger staff, depend heavily on computing equipment for analysis of data. Thus, the priority for the reduced FY 1986 equipment allotment was placed on providing the most effective mix of research equipment support to the staff.

Of the FY 1987 budget, \$348,100 has already been distributed to the departments for their research equipment replacement plans, exclusive of computers. An additional amount will be provided as personnel lapse funds are generated. The anticipated need to absorb the costs of the January 1987 pay raise did not allow the Museum to expend the full \$392,400 early in the fiscal year.

Annual reviews of the departmental equipment needs indicate that NMNH has a continuing need for a minimum of \$400-500,000 a year to upgrade and replace outmoded research equipment and purchase new kinds of equipment to keep pace with advances in technology. One-time additional increases will be requested during years when major equipment items need to be replaced, such as the Electron Microprobe in FY 1991 (anticipated cost -- \$500,000).

Research on Biological Diversity at NMNH

Question: An increase of \$250,000 was allowed in 1987 for research on biological diversity. How are you spending these funds in 1987, compared to the elements in the program as proposed, at \$330,000?

Answer: An amount of \$250,000 was allowed in FY 1987 for the NMNH Biological Diversity Program. As FY 1987 funding was uncertain, and key staff scientists were in the field when funds were approved, plans for this fiscal year were not finalized until February 1987. Thus, much of the first year costs will go toward setting up permanent inventory plots in Peru and Bolivia, and laying the groundwork for long-term, multi-disciplinary studies in the western and northern Amazon basin. Museum botanists are continuing their fieldwork as part of the international project to publish a modern Flora of the Guianas. Several expeditions are planned. Publications and symposia will follow, beginning in FY 1988. Fellowships for U.S. students cannot be funded due to

reduced budget. Training support (inventory methodology, systematics) for student nationals in the host countries will be funded by U.S. AID, and the World Heritage Program of UNESCO, in conjunction with the Smithsonian's Man and the Biosphere program. Below is a detailed summary of the current FY 1987 budget:

Personnel Costs

Administrative technician and Museum Technician (partial year funding)	\$27,900
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Travel (\$3,000/person, 30 days; including all field expenses)

Guiana expeditions (teams composed of 2-11 members)	27,400
Advance liaison team, Peru and Bolivia	6,000
Habitat teams, Peru and Bolivia	8,000
Survey teams, Peru and Bolivia	20,000
Inventory teams, Peru and Bolivia	35,000
Reconnaissance (Peru)	4,000

100.4

Workshop (invite systematists to Museum to develop worldwide strategy for integrated biological diversity studies)	15,700
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<u>Shipping</u>	2,000
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Contracts

Plant specimen preparation (mounting, labeling)	40,000
Botanist (Guiana)	18,500
Advance liaison and site consultants	7,000

<u>Supplies</u>	12,500
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Equipment

Lap-top computers	20,000
Herbarium cabinets	6,000

TOTAL	\$250,000
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Question: How do you intend to spend the funds in 1988?

Answer: Inventory teams of museum biologists and assistants will visit the sites set up in FY 1987 in Peru and Bolivia to collect and identify species in the permanent plots and surrounding protected areas. New permanent plots will be established in Ecuador and preliminary visits made by some museum biologists. A museum workshop will be held for U.S. natural history museum biologists to foster cooperative projects associated with the permanent plots in Latin America. Museum biologists associated with the inventories will train host-country students in inventory protocols and begin cooperative research projects where appropriate. A reconnaissance team will visit Venezuela to establish a working relationship with that country's biologists and government bureaus in order to select a site in which inventories can begin in 1989. Several more expeditions will be sent to the Guianas as part of the long-term Flora of

the Guianas project, and part of this Flora will be published as the manuscript becomes available. Zoologists also will accompany these expeditions.

Establishment of a Molecular Systematics Lab at NMNH

Question: 4 workyears and \$450,000 are requested, to establish a molecular systematics laboratory. What is the total cost for this effort expected to be, including staffing, equipment and supplies? Provide a breakdown for the record if necessary.

Answer: The total operating budget for a fully operational laboratory is projected to be \$1,098,000 per year, including staffing (26 workyears and \$684,000); supplies (\$189,000); equipment (\$125,000); and travel (\$100,000). In addition, major capital equipment purchases and space modifications totaling approximately \$1 million will be required over the first two to four years.

Question: How much of this request represents one-time costs only?

Answer: One-time major capital equipment purchases (and space renovations) will total approximately \$1 million over 2-4 years.

Question: Why is \$119,000 needed in FY 1988 for exchanging scientists? What will these costs include? How long will it take to get the laboratory established?

Answer: In addition to a central molecular systematics and evolution laboratory and one or more satellite laboratories, a competitive pool of funds is needed to complement these facilities for two reasons:

(1) Certain techniques now available would be extremely difficult or inappropriate to establish within the Institution. Examples include micro-complement fixation or any other immunological techniques requiring an animal facility. Other new techniques will likely be developed that cannot be easily accommodated with facilities established within the Institution. In order to maintain maximum flexibility and be able to employ certain research techniques required by individual projects, it is most effective to collaborate with researchers at other institutions already employing those techniques, and to provide support of travel costs and for costs to the host laboratory of such collaborative projects.

(2) Even with the establishment of a molecular systematics and evolution laboratory within the Institution, some Smithsonian scientists may, by virtue of shared research interests, wish to work with outside collaborators. Such collaboration should be encouraged, not only because the proposed laboratory will not accommodate everyone, but also because a collaborator's effort often will result in better research since the problem will be examined from two different perspectives.

The length of time needed to establish the proposed molecular systematics facilities in NMNH depend upon how quickly it will be possible to hire qualified scientists, and how quickly renovation of space in NMNH can be carried out. The initial phase will be located in existing laboratory space at MSC, and will accommodate the four scientists and technicians to be hired in FY 1988. The facilities will probably be fully operational in three to four years.

Arctic Research Program at NMNH

Question: 3 workyears and \$200,000 are requested for research on arctic archaeology, anthropology and biology. A National Arctic Studies Center will be established. Are there other such centers of expertise in existence, in or out of the Federal government?

Answer: Arctic anthropological and biological research is conducted by individual scholars in universities and museums in a number of private institutions, but all of these programs lack coordination and broad focus. They represent individual interests, with no institutional commitments to longterm programs, collection management, education, publication, fieldwork, or other scholarly activities. Even in major museums, like the Field Museum of Natural History or the American Museum of Natural History -- each having large research collections of arctic materials -- there is either no arctic curator-scientist or no institutional plan for continuing an existing arctic research program. University staffing always is in flux, with centers of knowledge shifting as staff come and go. At present there is no University where one can receive an education with concentration in arctic anthropology and archaeology at a high level of excellence.

Within the Federal government, there is no center of arctic anthropological research. The only basic research program is at the Smithsonian in the department of anthropology and it consists of a single curator who has no permanent assistance or longterm funding base. Within the state government, the University of Alaska Museum has an archaeologist and ethnologist on staff, and the Alaska Museum in Juneau has a single anthropologist. Hence, there is no center or research program in existence such as is proposed for the Smithsonian in anthropology and cultural studies.

As for Arctic biological research, there are few University Centers, having programs of limited size and scope, or relatively specialized focus. The University of Alaska has an Institute of Arctic Biology which tends to focus on the physical environment and on physiological adaptation to the Arctic. The University also does limited work in anthropology, as noted above. The University of Washington's Polar Sciences Center is heavily slanted toward the physical sciences, as is Ohio State University's Institute of Polar Studies; the latter also concentrates more on the Antarctic than the Arctic. The Institute of Arctic and Alpine Research at the University of Colorado strongly emphasizes the physical sciences and specializes mainly in alpine research. Finally, the Center for Northern Studies in Wolcott, Vermont, is a small private enterprise, working mainly in educational programs at the secondary school level. None of these centers possesses the kind of large research collections that NMNH maintains, and thus is the unique position of the Museum to do broadly based studies on the ecology, and systematic and evolutionary biology of the flora and fauna of the Arctic.

Within the Federal government, the Smithsonian is the only institution where basic research on northern biotas and peoples is being pursued. Although the U.S. Fish and Wildlife and other agencies do employ wildlife biologists, they have applied research missions that are dictated by law, and their efforts cannot be directed primarily at basic scientific research as proposed for the Smithsonian's Center. At present, however, the Museum has only a few curators who are doing biological research in the Arctic, including the Museum's director, who is committed to strengthening the program.

In short, the proposed Center fills a need documented in the recent Interagency Arctic Research Policy Committee's Draft Plan for a 5-year research program in the Federal government. No such broadly-focused center exists inside or outside the government that fills the need for longterm, continuing research on arctic anthropological and biological problems. Further, the Smithsonian has the collections, a track record of previous arctic research, and the facilities to advance this program broadly in terms of research results and educational activities.

Question: Are there other areas of research in NMNH that could be redirected to this new area?

Answer: Some funds have been reprogrammed to support participation in the Arctic Research and Policy Committee meetings and for studies in the eastern Arctic (Labrador). These funds are very limited and not sufficient from year to year to sustain a Center to coordinate and enhance Arctic studies. The Museum is not conducting research in any area that should be discontinued. Some reprogramming occurs continually but there is not enough flexibility in the base to initiate a new long-term program in arctic anthropology and biology. In addition, the Museum is actively seeking other sources of funding to support Arctic research and currently anticipates receipt of a substantial one-time gift from a private source in the latter part of FY 1987 earmarked for arctic biology.

Question: How much of the request represents one-time costs?

Answer: In the first year, approximately \$20,000 would be used to purchase equipment, but there will be a continuing need for other equipment requirements in subsequent years.

Question: What will the \$45,000 for "other services and related costs" be used for?

Answer: These funds will support field personnel (laborers, guides), contractors involved in cataloguing, conservation, and maintenance of collections, laboratory equipment, and supplies for laboratory and field research. In addition, these funds will support Native research and exhibition development, so that tribes and groups can come to the Smithsonian and work with the appropriate collections.

Related Priorities for Research and Exhibition Upgrading

Question: Given the recognition that there are exhibit areas in NMNH that badly need updating, why have you decided to make these new areas of research a higher priority for funding requests? What specific plans do you have for upgrading permanent exhibits in the Museum.

Answer: The Museum must continue to address new research needs to remain a leader in natural history and anthropology studies. Arctic research was a major thrust of the Museum in the earlier years, and now there is an urgent need for the Smithsonian to re-institute its Arctic programs, so that it can do its part in the new national effort to increase research in the northern polar regions.

Today there is a new awareness of the importance of the Arctic in national and global terms, with development and strategic issues becoming recognized. At the same time Arctic Native peoples are calling for increased research to aid their confrontation with the developing world. The Smithsonian is the only participant in the interagency Arctic Research and Policy Committee that is doing basic research on northern biotas and peoples. The Museum's other major research thrust concerns the tropics, where there is an urgent need to increase work on biological diversity by several orders of magnitude. Both of these thrusts are in keeping with the Secretary's mandate to promote and conduct high quality research.

At the same time, the Museum is developing a plan to renovate and modernize its permanent exhibits. Modernizing the exhibits will not be a simple matter because of the age of the building and the need for major, interdependent space renovation involving coordination of the HVAC Master Plan, other necessary space renovations, the West Court expansion, and the move to MSC. Accordingly, NMNH is preparing master plans for exhibit modernization that take these many factors into consideration, and it is expected that funds for the first phase in this program will be requested in the FY 1989 budget. In the development of these updated exhibitions, the latest knowledge gained from the Museum's strengthened research efforts will be incorporated into the subject information presented. For instance, the Arctic studies will be an important part of the preparation for the modernized exhibitions on Native Americans.

NMNH Computer Maintenance

Question: 1 workyear and \$47,000 is requested for computer hardware maintenance and replacement. How is computer repair currently taken care of, and funded? Is there no central source of such repairs or funding in the Institution?

Answer: At the Museum of Natural History (NMNH), one staff person and \$50,000, reprogrammed from other museum activities, currently support the repair of the Museum's computer equipment. This reprogramming of funds, along with increased computer usage costs for which the Museum has received no base increases, has reduced the Museum's former level of support for laboratory and collection supplies and equipment.

For the Institution as a whole, at present each Smithsonian bureau is responsible for maintaining its own computer equipment, through an in-house arrangement similar to NMNH, one or more service maintenance contracts, or individual repairs or service calls. During FY 1987, the central Office of Information Resource Management will hire two maintenance technicians, on a trial basis, to trouble-shoot malfunctions and to make basic repairs or replace components. Primarily this service will be aimed at meeting the needs of the many smaller bureaus and offices which do not have sufficiently large numbers of computers and related equipment to justify an in-house capacity. More complex or difficult repairs will continue to be done by outside firms. For the users of the central service, however, it is hoped that repairs can be accomplished more quickly and the requirements for outside service reduced and perhaps consolidated into fewer service or repair contracts. Yet to be worked out is the long range financing of this central service should it prove to be useful. Given its own extensive computer maintenance requirements, it is important for the NMNH to secure a stable funding base for this critical need.

NMNH Collections Management Program

Question: 6 workyears and \$160,000 is requested for collections management, to process large backlogs of uncatalogued materials. How long is this effort expected to take?

Answer: The Museum of Natural History (NMNH) is significantly larger than other Smithsonian bureaus in terms of collection size (96 million objects). Given the magnitude of the task, the NMNH conducted its original baseline inventory largely at the collection -- rather than the specimen -- or item-level, and thus many records represent several to many (even thousands) of specimens. NMNH is now refining these collection-level records into item- or lot-level inventories. (This phase includes the processing of large backlogs of uncatalogued materials.) Priority is being given to new acquisitions of monetary value, type specimens, collections of high use, and collections, destined for the MSC. This refinement process improves the Museum's collection-growth planning (greater selectivity), space allocation, and overall accountability and security. Furthermore, item/lot inventories facilitate and enhance the collection-based research process. Without a quantum change in base support, there will always be some "backlog," because of the rate of incoming specimens (896,208 accessions in FY 1986), and the increased funds are necessary just to keep the computer records current. In addition, these funds will be used to assist the Registrar to document loans and acquisitions, to monitor collections of high commercial value, and to assist in the conversion of NMHH's 3.5 million inventory records to the Collections Reference System on the Smithsonian's new IBM mainframe computer.

Question: What are the other collections activities, that your request of \$34,000 for computer costs, will allow to continue?

Answer: Since FY 1985, inventory personnel funds in the amount of \$100,000 have had to be reprogrammed to support an increase in the inventory portion of the NMNH computer usage bill. To provide a stronger collection management base, the Museum requests an increase of \$34,000 for computer costs, which will allow the Museum to restore some of these technical positions.

NMNH Columbus Quincentenary Activities

Question: 1 workyear and \$48,000 is requested for Quincentenary activities. How are the funds provided in 1987 (\$42,000) being used?

Answer: For the \$42,000 available in FY 1987, the budget is:

--Program Planning	\$17,200
--Travel, printing costs, and other support services to gather and preserve Mayan folk literature as part of a plan to build a Mayan tape archive and establish a bilingual series of publications directed to both American and Mayan audiences	2,000
--Preliminary site review, Wyoming pre-Columbian archaeological site	2,000

--Travel, contracts and supplies to gather research material for the script and to develop the design concept and education program for the Museum's major Quincentenary exhibit, "Seeds of Change"

	20,800
Total	<u>\$42,000</u>

Question: \$10,000 is included for preparatory work related to a possible major excavation of a pre-Columbian site in Wyoming. What would the total estimated cost of such an excavation be, and who would fund it.

Answer: Planned as a joint Smithsonian-University of Wyoming interdisciplinary research program, the project will investigate the archaeology, geology, and paleo-ecology of the region. The program will begin during July of 1987 when extensive testing of the site will be conducted to determine excavation strategies, as well as preliminary surveys to locate additional related Paleo-Indian localities. If the results of this work indicate that the preliminary assessment is accurate, an excavation program will be designed. Large horizontal areas of each occupation level will be exposed and information will be collected about site structure, activity areas, and cultural change. This work will be divided into two phases: field work and ongoing laboratory analysis. Field work will be conducted during the summers of 1988, 1989, and 1990. Laboratory work will be conducted simultaneously with the field work and between field seasons so that by the winter of 1990 a final publication and exhibits can be prepared. It is anticipated that the field cost will be approximately \$225,000. Lab costs are estimated to be \$175,000, which includes equipment, supplies, and personnel. The total cost for the project is estimated to be \$400,000. Costs of the archaeological training program for Indians, which are to be a feature of this project, will be additional, but they have not been determined, pending the work to be done this year to verify preliminary indications that this site will merit such intensive analysis.

Funding from the Museum of Natural History's Quincentenary program will support the preliminary site review (\$2,000 in FY 1987) and some of the field work (\$10,000 in FY 1988). The Museum will also provide additional base support for this project, including the personnel costs of a NMNH archaeologist who will participate in the field work. The Quincentenary program Office will seek additional funding for the excavation site in Wyoming from the Wyoming State Historical Committee and the Wyoming Humanities Council; some preliminary contact has been made with both agencies. Funding support is also expected from the University of Wyoming. They will assist us in seeking support from other sources as well, including the National Geographic Society and the National Science Foundation.

NASM Video Disc Project

Question: P. 76. The request for the National Air and Space Museum is \$9,037,000, an increase of \$224,000. You indicate that in FY 1987, the fifth disc under the Video Disc project will be completed. What do you plan next for the project?

Answer: The fifth videodisc containing the historical photographs of the U.S. Space Program and 70mm photographs from the space shuttle missions will be completed this fiscal year. The Museum will also complete a videodisc of historical photos of pre-1954 U.S. Air Force activities including the Korean

War and the Air Force Art Collection, which began in fiscal year 1986. Future discs will contain additional images from NASM's collection on space missions including Apollo, Gemini, Voyager, Viking and Mariner flights. Additional photos from the archival collection stored at the Garber Facility Archival Support Center, which include aircraft, equipment, engines, propellers and historic events will also be placed on future discs.

Question: How long do you expect the program to take before it is completed?

Answer: The preservation program for Archival photographs using videodiscs will be a continuing program. Each videodisc contains 100,000 photos. The Museum estimates that the current volume of its archival collection includes about 450,000 photos not now on disc. Since it began in 1981, the success of the disc project has led to an increase in donations to the Museum of 200,000 aeronautical photos. Future space shuttle and Voyager photography will dramatically increase NASM's collection of space photographs. Therefore, it is anticipated that the project will require 5 years to meet the current collection needs, which will more than double during that same period by the donation of additional aeronautical and space photo collections.

Change in Workyear Estimate for NMAH

Question: P. 85. The request for the National Museum of American History is \$13,648,000, an increase of \$275,000. The actual FTE's for 1986 are shown as 325, while the estimate last year was for 301. Please explain.

Answer: As a result of the distribution of funding previously associated with the Collections Management/Inventory Program to the individual museums, the actual FY 1986 workyear figure for the Museum of American History includes those workyears associated with the inventory work at the Museum.

Purchase of Duke Ellington Collection

Question: Has the Duke Ellington Collection been purchased yet? If so, what purchase price was agreed on?

Answer: An agreement in principle has been reached regarding the purchase of the Ellington Collection and the Museum hopes very soon to complete negotiations with the Ellington Estate. Final details on the purchase will be provided as soon as these negotiations with the Ellington Estate have been completed.

NMAH Exhibition Reinstallation Program

Question: An increase of \$227,000 is requested for the exhibition reinstallation program. This will bring the program to \$727,000. Why is this increase over the \$500,000 level necessary?

Answer: The requested increase of \$227,000 over the \$500,000 level is necessary to enable the Museum to continue the reinstallation program with sufficient funding to meet the scheduled timetable of exhibition work in coor-

dination with the scheduled building renovation work planned for the Museum's first and second floors.

Question: How long is the program expected to continue at this increased level?

Answer: The reinstallation of all of the Museum's permanent exhibitions is currently estimated to take approximately 15 to 20 years to complete. Progress on this program, which began in FY 1982 and which was originally expected to take 10 years to complete, has been slower than anticipated, partially due to the decreased availability of funds as a result of the Gramm-Rudman-Hollings reduction in FY 1986 and the anticipated absorption of the FY 1987 costs of the January 1987 pay raise and the new Federal Employee Retirement System.

Question: How exactly will the \$727,000 be used in FY 1988?

Answer: In FY 1988, the expanded funding base of \$727,000 will be used to pay for the research design, production and installation costs of four major reinstallations: "Made in America"; "Great Expectations: Everyday Life in 19th Century America"; "Medical Science"; and "Ceremonial Court."

NMAH Collections Management Program

Question: 5 workyears and \$93,000 are requested for collections inventory support. What is now in the base for this effort (funding and workyears)?

Answer: Base funding for collections inventory support at the Museum of American History is currently estimated at \$1,044,000 and 39 workyears. Of this amount, a sum of \$303,000 and 13 workyears, representing the distribution of funding previously associated with the Collections Management/Inventory Program, supports the actual collections inventory work directly. A further sum of \$741,000 and 26 workyears represents other base support, including an estimated percentage of curatorial and support staff time devoted to collections record-keeping.

Question: How long do you expect the increased effort to continue?

Answer: The extraordinary size of the Museum's collections (more than 17 million objects) and a legacy of inconsistent and generally inadequate recordkeeping prior to inventory, together with our National scope, make for a data base requirement and labor costs of enormous proportion. We will need more staff resources and automation support to eliminate backlogs and bring our recordkeeping up to standard. Without significant increases, and working with existing staff only, the task will extend well into the 21st century.

Of the funding requested for FY 1988, (2 workyears and \$34,000) will be needed to keep up with current work, and is therefore a permanent need. The balance of the request (3 workyears and \$59,000) will be needed for 25 years to complete refinement in the National Philatelic and National Numismatic Collection and eliminate backlogs in the National Philatelic Collections and two curatorial departments. During this period, additional support will also be required for the increased computer usage related to collections inventory work.

NMAH Columbus Quincentenary Activities

Question: 1 workyear and \$58,000 are requested for the Columbus Quincentenary program. How are the funds appropriated in 1987 being used (\$53,000)? How will they be used, in conjunction with the requested increase, in FY 1988?

Answer: The current appropriation of \$53,000 is being used for contract research in order to: develop a series of public programs on the evolution of Hispanic culture in the United States; produce a research conference on the historical archaeology of selected French, English, and Spanish colonial sites this September; contract research and travel in connection with exhibit planning for "America's Beginnings," scheduled to open in 1992; and to produce a small exhibit on 16th century Spanish Indian contacts at Drake's Bay, California, the first in a series of annual small exhibits leading up to "America's Beginnings."

The increase of \$58,000 and one work year will be used to: hire a full-time program assistant to serve as project coordinator for the Quincentenary exhibit planning and public programs during FY 1988; continue research and travel in connection with planning "America's Beginnings," produce a research conference on the historiography and archaeology of the Spanish borderlands; produce the second small exhibit; and to continue the public programs series on the development of Hispanic culture in the United States.

Center for the Study of American History

Question: 2 workyears and \$76,000 are included for the Center for the study of American history. Last year, the budget justification stated the Center would be established in 1986, but no funds were requested to accomplish this. What caused the delay, and why are funds being specifically requested now?

Answer: The Museum had planned to establish a research center for the study of American history in FY 1986 through the integration of several existing research centers of the Museum, including the Eisenhower Institute, the Afro-American Research Project, the NMAH Archives Center, and the journal "Technology and Culture." As indicated as part of the FY 1987 House hearings record, the establishment of this research center had to be deferred as a result of the impact of the Gramm-Rudman-Hollings reduction in FY 1986.

The new research center will combine, in a more structured way, the existing research programs of the museum with the relationships already established on an ad hoc basis with several universities. The new structure will promote new affiliations, and provide encouragement and opportunity for intramural research. In addition to the current staffing and resources of the individual research programs, the Museum requests two new positions and support funds to develop the program coordination and inter-disciplinary overview for the research center.

Question: Do you expect the program to continue at this level?

Answer: The Museum expects the program to continue at this level and does not anticipate any further increases at this time.

Collections Acquisition Funding for NMAA

Question: P. 94. The request for the National Museum of American Art is \$5,050,000, an increase of \$106,000, all for necessary pay. Last year, the collections acquisition account was shown at \$280,000 in 1987; it is now \$350,000. Please explain.

Answer: The works of art in the collections of the National Museum of American Art provide the foundation for its research, exhibition and education programs. The development of the collections through the acquisition of works by American artists continues to be a high priority of the Museum. As a result, the Museum conducted a zero base budget analysis of its programs during FY 1985 and identified funding available to reprogram to increase its collections acquisition account to \$350,000. This reprogramming, originally scheduled for FY 1986, was deferred due to the effects of the Gramm-Rudman Hollings reduction in FY 1986. These funds were reprogrammed to collections acquisition during the FY 1987 allotment process at the beginning of the fiscal year.

NPG Constitution Bicentennial Exhibition

Question: P. 100. The request for the National Portrait Gallery is \$4,069,000, an increase of \$235,000. Included is an increase of \$111,000 and 2 workyears for the Bicentennial of the Constitution exhibition. How exactly will the total of \$139,000 requested for development and installation be spent?

Answer: The funding requested to develop and install the exhibition, "Lawyers in America," in FY 1988 will be used for travel and research (\$5,000); transportation of art works (\$27,000); insurance of art works (\$14,000); publication of exhibition catalogue (\$50,000); the development of related education programs (\$20,000); and the purchase of services, supplies, photos, and equipment for exhibition installation (\$23,000).

Question: Since separate funds are requested for a new conservator position for the Gallery, why is a temporary conservator position included in this request?

Answer: The permanent new conservator position for the National Portrait Gallery is needed to keep pace with its growing collections and expanded regular exhibition schedule. A large number of items in the Gallery's collections need treatment and remain in danger of deterioration due to a lack of staff and funds.

The conservators on the NPG staff are responsible not only for treatment of works of art, but they must also give condition reports on all works of art, loaned from the Gallery, a number which totalled more than 300 last year. Additionally, they are often called upon to recommend treatment of works that are loaned to the Gallery for exhibition. They also must work with the design staff about the mounting and display of works of art.

In addition to the numerous paintings acquired by the museum (which often come from private collections and which have not had proper care because they have been maintained in a non-museum environment), the Gallery also has recently acquired large numbers of drawings and prints from the archives of artists, all of which need to be properly preserved. For instance, each year,

NPG is the recipient of more than 100 original works of art that are the basis of the Time magazine covers. Because the artists often thought of these works as items for one-time use, many standard preservation practices have not been observed.

The temporary conservator position, requested as part of the Constitution Bicentennial increase, will handle the conservation and associated documentation and consultation needed to put the works borrowed from other collections for the three major Bicentennial exhibitions in good physical condition. This additional workload will be beyond the capacities of the Gallery's permanent conservation staff, even with the new position. Without this temporary position, the conservation work required by the three Bicentennial exhibitions will severely hinder ongoing conservation efforts at NPG for the period from 1988 through 1990.

Travel Funding for Hirshhorn Museum

Question: P. 108. The request for the Hirshhorn is \$3,351,000, an increase of \$91,000. Included is an increase of \$11,000 for travel, or 21%, which was also increased by \$11,000 last year. Please explain the need to double the amount provided for travel in the last two years.

Answer: Because the Hirshhorn Museum is a museum of modern and contemporary art that exhibits and collects art from abroad as well as from throughout the United States, adequate funding for curatorial travel is very important to the Museum's programs. In FY 1987, funding of \$40,000 was provided to enable the curatorial staff to research the 6,000 objects added to the Museum's permanent collection by the Hirshhorn bequest. This research will require travel to museums, archives and other institutions throughout the United States and abroad to document and catalogue these works.

For FY 1988, additional funding is requested as part of the initial planning of a major exhibition commemorating the Columbus Quincentenary. This exhibition on international twentieth century art will feature artists from throughout the western hemisphere whose work is principally dedicated to or inspired by the themes of investigating unknown frontiers and new realms of information and experience. Curatorial travel to Central America, Mexico and Canada is essential in developing this exhibition.

Hirshhorn Orientation Center

Question: The justification states (p. 110) that an orientation center will be built in the lower level of the Museum in 1987. What funds are being used for this purpose? How much is involved?

Answer: The Hirshhorn Museum and Sculpture Garden had construction funds available for this project which cost approximately \$30,000.

Hirshhorn Columbus Quincentenary Activities

Question: An increase of .5 workyear and \$23,000 is requested for the Quincentenary. What is the total expected cost of this effort, and the amount you expect to request annually over the next five years?

Answer: The total cost of the major exhibition being developed by the Hirshhorn to commemorate the Columbus Quincentenary is currently projected to be \$359,000. In addition to the \$4,000 appropriated in FY 1987 and the requested increase of \$23,000 for FY 1988, the following table shows the level of funding to be required for the exhibition from FY 1989 through FY 1993. As the planning and research for this exhibition continues, these preliminary estimates may need to be revised.

<u>FY 1987</u>	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>	<u>FY 1991</u>	<u>FY 1992</u>	<u>FY 1993</u>	<u>TOTAL</u>
\$4,000	27,000	27,000	37,000	55,000	144,000	65,000	\$359,000

Research Programs at the Sackler Gallery

Question: P. 112. The request for the Center for Asian Art is \$3,961,000, an increase of \$426,000. According to the justification (p. 116), the Sackler Gallery anticipates providing research and publication support for Artibus Asiae, the Asian art history journal currently published by the Sackler Foundation. Will this involve Federal funds? If so, how much would be involved?

Answer: No Federal funds will be used to provide research and publication support for the journal Artibus Asiae.

Question: The Sackler Gallery will have an active program for awarding research fellowships, starting with a grant from the Rockefeller Foundation which runs from 1985 to 1988. What are your plans for this program after 1988? Will you be able to apply for a renewal of the grant?

Answer: Since there are no restrictions on renewal of the grant, we intend to apply again.

Sackler Exhibition Funding Base

Question: An increase of \$279,000 and 5 workyears is requested, which is offset by a decrease of \$310,000 for one-time exhibition costs for the inaugural exhibition at the Sackler. How much will this leave for the exhibitions base of the Sackler?

Answer: The exhibition base for the Sackler Gallery, after the reduction for the one-time inaugural exhibition costs is taken, will be \$1.2 million.

Collections Storage Equipment for the Freer Gallery

Question: \$100,000 is requested for collections storage equipment for the Freer Gallery, to be purchased during the renovation of the Freer. When will the renovation be completed?

Answer: The Freer renovation is expected to be completed in the summer of 1989.

Question: Why it necessary to begin to purchase the new equipment now?

Answer: It is necessary to begin to purchase this portion of the new collections storage equipment in FY 1988 because of the lead time required for the manufacturer to design and make the custom work for delivery in early 1989. This will allow the installation of the storage equipment during the final stages of building renovation work, and reduce the time needed to relocate the collections into the renovated space. This, in turn, will allow the exhibition installations to be completed as soon as possible and the building to be reopened to the public as scheduled.

Question: Is it possible the requirements for storage equipment might change as the renovation progresses?

Answer: It is unlikely that the requirements for the collections storage equipment will change as the renovation progresses.

Sackler Public Affairs Staff

Question: Also included in the request is \$38,000 and 2 workyears for a public affairs assistant and an editorial assistant. How many positions does the public affairs staff now have? Provide a breakdown for the record.

Answer: The public affairs staff of the Center for Asian Art currently consists of one position: a public affairs specialist added with funding provided in FY 1986 for the Sackler Gallery.

Collections Acquisition Funding for NMAFA

Question: P. 128. The request for the National Museum of African Art is \$3,401,000, an increase of \$272,000. Why has the collections acquisition amount for both 1987 and 1988 increased from \$120,000 to \$130,000?

Answer: A base of \$30,000 for collections acquisition was first established for the National Museum of African Art by Congress in the FY 1981 appropriation. In FY 1986, an increase of \$100,000 was appropriated by Congress. The original funding base, however, had been eroded over the period from FY 1982 through FY 1985 through the effects of the major across-the-board reductions and the requirements to absorb portions of the funding needed for the legislated pay raises enacted each year. Because of the Museum's recent initiative to strengthen its collections, an effort has been made to restore the full base of \$130,000 during the FY 1987 allotment process.

Shipping Costs for NMAFA Exhibitions

Question: Included in the increase is a request for \$69,000 for shipping costs for major loan exhibitions. Last year, the request included \$150,000 for packing and shipping costs. Please explain how that request was affected by the reductions imposed in FY 1987, and how much is now in the base for such costs.

Answer: The increase for packing and shipping represented a proportionately large amount of the total program increase requested for FY 1987. Thus, given the magnitude of the total reduction that had to be taken, the

Museum had to absorb a large portion of the cut in funding for shipping (\$66,000). The Museum also absorbed the full amount of the inflation reduction (\$40,000) in shipping in order to continue to provide sufficient funding for ongoing programs such as education, conservation, and research. In addition, \$60,000 of the remaining funding was needed to cover higher than anticipated costs of preparing the gallery spaces to meet specific exhibition design requirements. The combined effects of these factors resulted in a decrease of \$166,000 from the initial estimated funding level of \$191,000, leaving a current base of \$25,000 for packing and shipping costs.

The negative effect of this reduction for FY 1987 has been offset by the fact that the grant received by the Museum for the major inaugural loan exhibition provided funds to cover packing and shipping costs for that exhibition. An expanded funding base for FY 1988 and following years will be necessary, since the availability of such support to supplement appropriated funds for shipping costs can not be depended upon after the inaugural exhibitions.

Anacostia Neighborhood Museum

Question: P. 136. The request for the Anacostia Neighborhood Museum is \$931,000, an increase of \$16,000. An increase of \$35,000 is requested, included \$25,000 for publishing research conducted over the last several years. What is now in the base for research?

Answer: In the Anacostia Museum's budget, 5 workyears and \$208,000 are devoted to research. Of this amount, approximately \$158,000 represents personnel costs, and a sum of \$50,000 is used for printing costs for one exhibit catalogue (\$35,000); research travel (\$4,000); transportation of objects (\$5,000); and research support materials (\$6,000).

Question: An increase of \$10,000 is requested for graphic, photographic and audiovisual materials for exhibition. How much is now in the exhibition base of the museum?

Answer: The Anacostia Neighborhood Museum's exhibition base is 5 workyears and \$282,000. Of this amount, approximately \$138,000 represents personnel costs and a sum of \$145,000 is used for contractual services and supplies and materials for exhibit production (\$100,000); audiovisual production (\$25,000); photographic supplies (\$15,000); and graphic design supplies (\$5,000).

Conservation Training Programs

Question: P. 141. The request for the Conservation Analytical Laboratory is \$2,418,000, an increase of \$42,000. The Committee has received the Smithsonian's proposal for the \$300,000 added to CAL's budget in 1987 from National Museum Act monies. Assuming you do spend the additional money as planned in 1987, what are your plans for fiscal year 1988?

Answer: When funding for the National Museum Act was eliminated in FY 1987, Congress allocated \$300,000 to the Conservation Analytical Laboratory to support training activities. The funds will be used in four activities: Support for existing academic conservation training programs; Support for students at the new Johns Hopkins/Smithsonian graduate program in conservation science; 6 Smithsonian post-graduate internships for conservators who have

recently completed their basic training; and training activities for conservation professionals, e.g., workshops, seminars and courses, either organized by the Conservation Analytical Laboratory or other interested organizations through contracts. It is expected that all of these activities will be continued in FY 1988, with the possible exception of the first, depending on the ability of those training programs now being funded to find alternative sources of support. In that case, the corresponding available funds will be used to strengthen the other initiatives, while alternative activities will be investigated and pursued according to perceived needs in the field.

SITES Columbus Quincentenary Activities

Question: P. 149. The request for SITES is \$719,000, an increase of \$151,000. An increase of \$90,000 is requested for the Columbus Quincentenary. Explain what is involved in "investigating the cost of researching, designing, and producing the exhibition", for which \$45,000 is requested.

Answer: The requested funding of \$45,000 will be used to contract with a Quincentenary exhibition coordinator who will be responsible for all phases of exhibitions that will result from the research conducted by SITES staff and guest curators on Quincentenary projects and to purchase related services and supplies. Currently, SITES is exploring several exhibition themes to produce a series of Quincentenary exhibitions. The curators will: establish the existence of objects and the feasibility of developing thematic exhibitions based on the collections surveys to be undertaken in Latin America, Spain and Portugal; research the basic exhibition concepts; and provide SITES with an outline, script, and resources on the topic. The Quincentenary coordinator will work with these scholars to develop these exhibition concepts into a comprehensive program of traveling exhibitions and to provide budget projections and cost analyses for exhibition production and shipping requirements.

International Center Exhibition Planning

Question: P. 161. The request for the Directorate of International Activities is \$908,000, an increase of \$270,000, or 42%. \$110,000 is requested for exhibition planning. Do you have any exhibition base planning funds now?

Answer: The requested increase of \$110,000 would establish an expanded base of \$226,000 that is needed for exhibition planning for the International Center Gallery in FY 1988 and future years.

Tropical Biological Workshops

Question: \$30,000 is requested for tropical biological workshop development. Last year, the request for this purpose was \$23,000, which was not funded. Explain the difference of \$7,000.

Answer: One aspect of the current request that had not been included in the original request in FY 1987 is the need to involve biologists from tropical countries who have been active in conducting training programs. By working with these biologists in developing the tropical biological workshops, curriculum can be designed to address the most pressing needs not currently covered in existing training programs. The additional \$7,000 will be used to pay the travel costs

incurred by these biologists participating in the development of these workshops.

International Center Programs

Question: An increase of \$70,000 is requested to develop a series of symposia, public lectures, and film programs to complement the second International Center exhibition. What is included in the \$51,000 requested to support the symposia series, the \$7,400 for the lecture series, and the \$11,600 for the film series? Provide a breakdown for the record.

Answer: The \$51,000 is requested to support three 3-day symposia at a cost of \$17,000 each. The funding will provide for the travel and per diem of twelve invited participants, both national and international, as well as publication of presented papers. The cost breakdown for the symposia series is as follows:

Travel	
Domestic	
(3 x 8 speakers @ \$500)	\$ 12,000
International	
(3 x 4 speakers @ \$1500)	18,000
Honoraria	
(3 x 12 @ \$150)	5,400
Per Diem	
(3 x 12 @ \$100/day x 3 days)	10,800
Printing	
	4,800
TOTAL	\$ 51,000

The \$7,400 requested for the lecture series would provide for three public lectures following the symposia at a cost of approximately \$2,450 each. The cost breakdown for the lecture series is as follows:

Travel	
(3 x 1 lecturer)	\$ 4,500
Per Diem	
(3 x \$100/day x 2 days)	600
Honoraria	
(3 x \$300)	900
Video Recording	1,400
TOTAL	\$ 7,400

The \$11,600 requested for the film series covers the costs of shipping, viewing and selecting films to be used in the series. Once the series is developed the costs are associated with rental of selected films, travel, per diem and honoraria for non-Smithsonian presentors and costs of a projectionist. The cost breakdown for the film series is as follows:

Film Selection	
Shipping & Viewing fees	\$ 3,750
(50 films @ \$75)	
Consultant to Screen	
all films; develop series	
(1 month @ \$2,500/mo)	2,500

Film Series	
Film rental	
(12 films @ \$75)	900
Projectionist	
(12 nights @ \$100)	1,200
Travel	
(5 Presentors @ \$300)	1,500
Per Diem	
(5 x \$100 x 2)	1,000
Honoraria	
(5 x \$150)	750
TOTAL	<u>\$11,600</u>

DIA Columbus Quincentenary Activities

Question: \$47,000 is requested for the Quincentenary. What will the \$15,000 for contractual costs be used for?

Answer: The \$15,000 will be used to contract for the services of an educational specialist to develop the educational packet and a designer to design the packet.

Funding for American Studies and Folklife Programs

Question: P. 169. The request for American Studies and Folklife programs is \$806,000, an increase of \$54,000. Of this increase, \$39,000 is for the Quincentenary, which will bring the total for this effort in 1988 to \$50,000. Do you expect to continue funding this effort at this level in the coming years?

Answer: Additional federal and outside funding support will be required to carry out a planned "Quincentenary" component of the Office of Folklife programs during the period FY 1989 - FY 1992. However, the estimates of the costs of such additional programming in those years have not yet been fully developed. We will be pleased to provide such information to the subcommittee when it has been completed.

Funding for American Studies and Folklife Programs

Question: Do you anticipate any changes in the scope or funding available for the annual Folklife Festival this year, or in the future?

Answer: While base federal and Smithsonian trust funds available for the annual Folklife Festival will remain the same for FY 1987 and FY 1988, it is anticipated additional federal funds will be sought in FY 1989 to allow primary research in occupational, Native American and Black American Folklife in order to conserve and document disappearing and rapidly changing traditions. Planning, production and presentation support for Festival programs will be sought from outside funding sources.

Total funding for the Festival fluctuates from year to year depending upon the type and scope of its programming, which is developed to conform to the funds made available by the sponsoring locale, state or country. For instance: a small local program can be produced for about \$100,000; an average State

program costs about \$500,000; a program featuring a particular country averages from \$600,000 to \$1,000,000, depending upon a variety of circumstances--type of program, number of participants, distance from D.C., etc. The ability to raise funds to support these programs is an important factor in determining the scope of the Festival.

Funding for American Studies and Folklife Programs

Question: Why have you revised your estimate of Federal grant or contract funds available for the Festival for 1987 from \$852,000 last year to \$669,000 this year. What is the basis of the large increase expected in 1988, to \$1,198,000?

Answer: Major Festival programs are supported by funds from outside sources. Although planning and fund raising may be under way for several years, funds may not become available as anticipated and the program must be dropped or postponed as has happened in 1987 with China. Many changes occur which impact on the availability of funds during the 2 to 2-1/2 year budget cycle.

Below is a schedule of Festival programs and anticipated funding for FY 1987 and FY 1988:

	FY 1987 <u>Estimate</u> /1	FY 1987 Spending <u>Plan</u>	FY 1988 <u>Estimate</u>
State of Michigan -----	\$352,000	\$438,500	
China-----	500,000		
Commonwealth of Massachusetts-----		100,000	\$547,900
District of Columbia-----		50,000	150,000
Sweden-----		80,000	500,000
Totals	\$852,000	\$668,500	\$1,197,900

/1 FY 1987 Estimate as reflected in the FY 1987 Congressional Budget Justification.

A contract with the Commonwealth of Massachusetts has now been negotiated and signed for a total of \$600,000 (\$100,000 in 1987 and \$500,000 in 1988 as opposed to the above estimate of \$547,900). Corporations and other organizations have been approached for the planned District of Columbia program, but with no firm commitments. Positive discussions are under way with Sweden but no funds have been identified.

Office of Symposia and Seminars

Question: P. 178. The request for Academic and Educational programs is \$971,000, an increase of \$131,000. Explain the increase in the base funding of the Office of Symposia and Seminars, from \$99,000 last year to \$200,000 this year.

Answer: The increase in the Office of Smithsonian Symposia and Seminars' base funding -- from \$99,000 in FY 1986 to \$200,000 in FY 1987 -- is attributable to the special one-time funding of \$100,000 made available by the Congress for an FY 1987 symposia commemorating the Bicentennial of the U.S. Constitution.

Smithsonian Fellowships in Molecular Biology

Question: \$100,000 is requested for an interbureau fellowship program. Describe how these funds would be used, including how many fellows would be supported, at what stipend, and for what period of time.

Answer: The funds would be used to support visiting investigators who propose to conduct research in Molecular Biology using the facilities of more than one bureau. Fellowships would be available to persons at the graduate student and postgraduate levels for periods of three to twenty-four months. The number of awards offered would depend on the academic level and duration of the appointments, but approximately five to ten awards are anticipated. The stipend levels would be determined by existing guidelines set for other fellowship programs at the Institution.

Question: Why are you proposing this fellowship program be initiated with Federal funds? Aren't the existing fellowship programs supported with non-Federal funds (see p. 182)?

Answer: Consistent with Smithsonian practice, fellowships are offered with Federal funds when they are directly related to research programs that require a much closer integration with specific programmatic objectives. The \$100,000 request for interbureau fellowships is indeed directly related to the new research initiatives in Molecular Biology and Evolution for which Federal support has been requested by STRI, NZP, NMNH.

The Institution-wide fellowship programs, such as the pre- and postdoctoral fellowship program, were transferred from Federal funding to non-appropriated Trust funds in FY 1979. They continue to be supported with non-appropriated funds and have increased over 300 percent since that time.

National Science Resources Center

Question: One workyear and \$125,000 is requested for the National Science Resources Center, which was organized by the Smithsonian and the National Academy of Sciences to improve the state of American education in the sciences and mathematics. What funds were used to pay for the conference held in July, 1986, the first effort of the Center?

Answer: The National Conference on the Teaching of Science in Elementary Schools, organized by the NSRC in the summer of 1986, was supported by a \$40,000 grant from the Smithsonian's Special Educational Outreach Fund.

Question: Does the Center have any staff to date? If so, describe them, and how they are funded, including the cost.

Answer: The National Science Resources Center currently has two permanent staff members, the Executive Director and the Program Director. Salaries and benefits for these two staff positions plus support costs total \$180,000 and are provided in the Smithsonian Trust budget.

Question: What position will be added with the requested workyear, and at what cost?

Answer: The FY 1988 Federal budget request includes one position (one workyear funded at \$25,000 for salary and benefits) for an administrative assistant for the National Science Resources Center.

Question: How will the balance of the request be used?

Answer: The additional funding requested for NSRC office support includes: \$19,000 to be used to support the publication of NSRC reports, teacher resource materials, newsletters, and brochures, as well as general office photocopying needs; \$17,000 for professional services such as editorial and lay-out services, photography, graphics production, and data processing; \$15,000 for the purchase of publications, books, audiovisual materials, and computer software for the NSRC Science and Mathematics Teaching Resource Center; \$6,000 for science materials and supplies for teacher seminars and workshops; \$9,000 for science apparatus and equipment; and \$9,000 for general office supplies and services. The budget request also includes \$25,000 to provide partial support for an annual NSRC conference on precollege science and mathematics education, modeled on the successful elementary science conference that was held in 1986. Future conferences will focus on the improvement of basic science literacy at the junior high school level and the incorporation of recent developments in science and technology into the high school curriculum.

Question: How much support is the National Academy providing?

Answer: The National Academy of Sciences has provided the National Science Resources Center with \$240,000 in planning and start-up funds. In addition, the National Academy has raised \$416,000 in grants for NSRC projects during the current fiscal year.

Question: What other non-Federal resources are being made available to the Center?

Answer: The National Academy of Sciences is currently raising private-sector funds to support the NSRC's planned elementary school science improvement project, Science and Technology for Children. The funds required for this project, (an estimated \$500,000 per year for four years, totaling \$2 million over the four-year period) are being raised from private foundations and industrial corporations.

Question: What is the total expected annual operating cost of the Center, and what are the expected sources of funds to meet this level of funding?

Answer: Within the next two years, it is anticipated that the annual operating budget of the National Science Resources Center will rise to about \$1 million per year. About \$500,000, or half of the total amount, will be provided by private foundations and corporations. The remaining amount will be provided from the Smithsonian Trust and Federal budgets.

Endowment for Symposia and Seminar Programs

Question: On page 183, it is noted that a new \$3 million endowment effort is being developed to augment operations of the Office of Symposia and Seminars. How is this being accomplished? What will the increased funds be used for?

Answer: As the interdisciplinary studies arm of the Smithsonian, the Office of Symposia and Seminars seeks a \$3,000,000 endowment as a long-term goal to provide a stable and secure source of funds with which to support its programs. The endowment target is part of a long-term plan which may not be realized for a decade. It would build upon two small endowments already in hand to help support interdisciplinary studies at the Smithsonian. Benefactors will be sought from individuals, corporations and foundations in the U.S. and abroad. Though Federal and Smithsonian Trust funds still will be needed for future commemorations and special projects, income from an endowment such as that envisioned will help strengthen the office's mission to share knowledge between specialists and the public at large. The proposed endowment would function as a chair of interdisciplinary studies, comparable to those in universities.

Museum Support Center

Question: P. 184. The request for the Museum Support Center is \$4,475,000, an increase of \$28,000. What is the current status of the General Contractor's effort to subcontract for the manufacture of collection storage cabinetry?

Answer: On January 22, the General Services Administration (GSA), our agent for procuring the MSC Collection Storage Equipment System, sent a "show cause" letter to the General Contractor. On March 4, GSA met with the Contractor and told the President that his company's responses to the GSA letter were totally inadequate and unsatisfactory. After this meeting, GSA thoroughly evaluated the statements made by the Contractor at the meeting and decided to issue a new letter on March 5 which directs the Contractor to provide no later than March 23: a detailed schedule for structural and utility work; a detailed schedule for storage cases and components; evidence of an award of a subcontract or purchase order for the storage cases and components; delivery of, or schedule for, a revised pre-prototype sample storage case meeting the contract requirements as presently modified; and any contemplated changes in the pricing schedule for storage cases and components. The Contractor was informed in this letter that failure "to provide this information in a satisfactory or sufficient manner by close-of-business March 23, 1987, will result in the issuance of a Termination for Default on March 24, 1987. No extensions of this deadline will be considered."

[Supplemental Material submitted 5/15/87 follows]

On March 23, 1987, the General Contractor provided information to the General Services Administration on the issues raised by GSA in its "show cause" letter of March 5, 1987. In that response, the General Contractor stated "we have not entered into a fixed-price agreement with any cabinet supplier. However, we are in a position ... to have a signed contract with Rousseau Metals, Incorporated, within 48 hours."

In its reply dated March 26, 1987, the GSA stated:

"Based on the information submitted by you on March 23, 1987, the General Services Administration (GSA) will not terminate for default its contract GS-11B-38074 with (you) at this time. GSA acknowledges your statement concerning the proposed

contract with Rousseau Metal Products, Inc. (Rousseau), and the schedule of performance milestones delineated on the submitted bar chart. As a result, it has been determined that GSA shall continue to pursue completion of this contract with (you).

Nonetheless, we consider your performance to date to have been untimely and deficient. Liquidated damages are continuing to accrue. Also, a commitment to meet the scheduled milestones must be evidenced by your performance over the next 60 days. Implementation of the schedule provided the Government has not and shall not waive the previously established contract completion date."

Furthermore, GSA stated that it expected the contract to be signed within 48 hours and requested a copy of the contract. Subsequently the General Contractor showed the GSA Contracting Officer a copy of the executed subcontract for the cabinets. A meeting of the General Contractor, GSA, Rousseau, and the Smithsonian to discuss technical matters and next steps was held on May 7, 1987.

Question: What impact is the continued delay in getting the cabinets having on the funds available in FY 1987?

Answer: The major impact that the continued delay in getting the cabinets is having on the funds available in FY 1987 is that inflation costs continue to increase while the Government waits to place its final unit price cabinet component orders (doors, special insets, shelves and chairs). There is a provision in the contract for adjustment of each unit price according to the "Engineering News Record" at the time each order is placed. Since funding is very tight as a result of the reduction in the FY 1987 appropriation, the cost estimates for necessary change orders must be finalized before the Government can determine which cabinet components it will have to defer for procurement beyond FY 1987.

Question: If the delay continues, what might be the effect on the request for FY 1988?

Answer: All "initial move" unit price cabinet components for which the Institution does not have sufficient funding in FY 1987 would have to be purchased with FY 1988 funds in order that all the high density "initial move" collections could be relocated to MSC Pods 1,2, and 4 as soon as possible. The unit prices in the existing storage equipment contract for the unit price cabinet components will expire on September 30, 1987. If these components have not been ordered by the end of FY 1987, a new contract would have to be negotiated, and the Institution might face higher prices for these components. The Institution will keep the Congress informed of new information that will impact the FY 1988 budget request emerges.

Question: When will you receive actual bids on the high bay equipment, so that you can determine if your estimate of \$1,700,000 is accurate?

Answer: According to Federal Acquisition Regulations, bidding for the manufacture and installation of the high bay storage equipment cannot begin until funding is in hand to award a contract. The Institution cannot, therefore, begin the bidding process for this equipment until Congress has appropriated the funding. This funding has been requested for FY 1988. Once the design is completed and the funding received, the Institution can proceed to bid the contract documents. This bidding process occurs over a period of several months. At the end of the process, the bids of the competing firms are received. At that time the Institution will know whether or not the estimate provided by the design firm is accurate (\$1,540,000 plus inflation). As noted in the FY 1988 Budget Justification, the inflation rate that will prevail at the time of award of the contract is dependent upon the time of the bid as well as the city of the bidder.

The Institution has put the design of the high bay equipment system on hold until all issues have been resolved on the design of the high density system. Since many of the problems discovered during the final design phase of the high density system could also apply to the high bay system (e.g. the need for the installation of strip footings), it was thought best to wait until final solutions were recommended for the high density system. The final structural design of this system is almost complete. As a result, the Institution should be able to reinstitute soon the design of the high bay system and the preparation of contract documents for bid.

Funding Base for Administration

Question: P. 190. The request for Administration is \$22,356,000, an increase of \$6,620,000. Included is \$5,274,000 for the new retirement system. The requested program increase is \$914,000. Provide a breakdown showing how the FY 1987 base estimate of \$15,736,000 was derived, starting with the appropriation of \$12,417,000.

Answer: The following table shows the derivation of the base estimate for FY 1987:

FY 1987 Appropriation	\$12,417,000
Grade target reduction (reflects distribution of the reduction to appropriate units throughout Institution)	330,000

Net reprogrammings (primarily transfer to Administration of Safety from Protection Services)	746,000
FY 1987 requirements for pay costs for units in Administration	272,000
Institution's FY 1987 requirement for increased costs associated with FERS	1,971,000
	<hr/>
FY 1987 Revised "Base"	\$15,736,000

Computer Costs for Accounting Records

Question: Explain in more detail how the \$150,000 requested for maintaining accounting master files on the mainframe computer, and keeping the mini-computer updated, will be used.

Answer: As noted in our discussion of our plans for Payroll/Personnel, the Institution has acquired an IBM 4381 to replace our outdated Honeywell. In order to meet Federal requirements for historical fiscal data retention, it will be necessary to transfer accounting records now housed on the Honeywell to the IBM. This transfer is in addition to on-going current year processing.

It must be noted in this context that the Institution has in recent years underestimated its actual computer processing costs with respect to the Federal budget by \$100,000 per year at a minimum. Federal appropriations have increased year to year and along with them financial processing needs.

As to the minicomputer, which feeds into the mainframe, accounting records used to be updated once a month. During the past year, the Institution has moved to update the files on a weekly basis in order to have more current information at hand for funds control. Daily updating is really required, significantly increasing computer usage.

Personnel Costs for Facilities Planning

Question: Under the request for facilities services, what are the expected salary costs for the two positions requested (a planner and clerical support), for which \$116,000 is requested?

Answer: Anticipated salary and benefit costs total \$78,000 for a Facilities Planner GM-15 (\$61,000) and a Secretary GS-5 (\$17,000).

Environmental Management and Safety Programs

Question: Under Environmental and Safety, what is the breakdown of salary and other costs included in the requests for the Hazardous Waste program (\$112,000) and the asbestos abatement program (\$132,000)?

Answer: In the Hazardous Waste Program \$31,000 is allocated for personnel costs, \$63,000 for five storage enclosures, \$15,000 for sampling and laboratory

analysis and \$3,000 for supplies and travel. In the Asbestos Abatement Program \$54,000 is allocated for personnel costs, \$50,000 for laboratory analysis, \$23,000 in equipment and sampling media and \$5,000 in travel.

Question: Since you already have an asbestos abatement program underway, how are the activities for which you are requesting the increased funds being carried out now? What is the base funding available for this effort?

Answer: The activities are currently being contracted out to an industrial hygiene firm (\$275,000 in FY 1985-86) which performs the required sampling and laboratory analysis. R&R funds have been used for this work since it related to the abatement effort and other funds are not available. The effect has been, however to slow the actual physical correction of problems.

Question: Describe the equipment you are proposing to purchase with the funds requested under automation and information equipment?

Answer: The Office of Environmental Management and Safety requests \$46,000 to purchase nine IBM compatible personal computers with increased storage capacity and modems, nine draft-quality printers, three letter-quality printers, and necessary software to establish an office network system. Other funds requested will be used to defray the cost of time sharing and on-line communications (\$10,000) and to conduct an evaluation of the information management needs of OEMS to provide guidance in the purchase and utilization of the automation equipment (\$15,000). This evaluation is expected to take less than 6 months.

Personnel Costs for Procurement and Property Management

Question: Under Procurement and Property Management, what is the breakdown of salary and other costs included in the request of \$108,000?

Answer: The breakdown is \$89,000 for personnel compensation and \$13,000 for benefits for two GS-14 positions, a manager of contracts to supervise all personnel involved with procurements and contracts and a manager for all Institutional personal property including its inventory, warehousing and excess property acquisitions and furthermore, for monitoring all delegations of purchasing and contracting authority throughout the Institution. The balance of the request, \$1,000 for supplies and materials and \$5,000 for equipment, is to support these two positions.

Development of Institution-wide Software Systems

Question: Are you planning to continue the software development effort, for which \$200,000 was added to the base in 1986? How long is this effort expected to continue at this level?

Answer: Yes, now that the bibliographic system for the Institution is successfully operational, the development account of about \$625,000 (which includes the \$200,000) is being used primarily for the acquisition of specimen and object collections information systems (about \$200,000 each in FY 1987 and 1988), for hardware and software connection links among and within buildings, including use of the raceways being constructed using R&R funds (about \$100,000 in FY 1987 and

\$225,000 in FY 1988), for administrative management systems (\$180,000 in FY 1987 and \$50,000 in 1988), and user support and problem solving (about \$70,000 in each of the two years).

The account has proven to be extremely valuable in acquiring functional systems basically applicable to the needs of many users in the bureaus and offices. It will be needed at this level for the next several years with emphasis on collections systems and communications development.

Office of Design and Construction

Question: P. 200. The request for the Office of Design and Construction is \$2,261,000, an increase of \$122,000. What is the average grade and salary for the positions funded in this Office?

Answer: For the first quarter of FY 1987 the average grade was 11 at an average salary of \$35,514.

Question: An increase of \$75,000 is requested to implement an automated management and production scheduling system, on a one-time basis. How specifically will these funds be used?

Answer: The requested funds will be used as follows: (1) \$60,000 to purchase mini-computer hardware (2) \$5,000 to purchase and install network to link PCs and mini-computer together (3) \$2,000 to purchase software (4) \$8,000 for contract services to develop format/s and base data.

Smithsonian Proprietary Security System

Question: P. 203. The request for the Office of Protection Services is \$19,419,000, an increase of \$818,000. Last year, you thought the proprietary security system would be completed by the end of 1986; now you estimate the end of 1987. What has caused the delay in completing installation of the system?

Answer: The contract completion date had been established as November 28, 1986. There are a number of reasons for the missing of that date. First, testing indicated that a change was needed in the design of one of the major components of the system, resulting in a delay. Second, the controlling, central portion of the entire system is located in the South Quadrangle. Inability of the Smithsonian to make the space available to the system contractor caused a delay in the installation of that portion of the system. Third, when work got under way for the renovation of the control and computer room space in Natural History, asbestos was discovered. Work could not proceed until a contractor could be found and a contract awarded for the removal of that asbestos. Thus there was a four month delay in completion of space renovation. It should be noted that these delays have resulted in no increase in the proprietary system contract and thus no request for additional funding. The contract completion date is now estimated to be April 15, 1987.

Base Funding Needs for Office of Protection Services

Question: An increase of \$666,000 is requested, as a redirection of base resources, to hire 26 guard positions previously authorized by Congress, and

purchase supplies and equipment to support these position. What is the breakdown of this request by cost category?

Answer: The breakdown by cost category is as follows: Salaries \$442,000, Benefits \$62,000, Other Services \$50,000, Supplies and Materials \$64,000, and Equipment \$48,000.

Question: What lapse rate has been applied to the salary portion of the request?

Answer: There is no salary lapse considered in the figures. To receive an appropriation that is less than the required costs would in the following year cause a base shortage.

Question: What do you mean when you say these positions have been "previously authorized" by Congress?

Answer: Through FY 1987, Congress has authorized 595 guard positions. Over the past several years (beginning in FY 1982), several across-the-board reductions have eroded the base resources of OPS so that although the Congressionally "authorized" strength of the guard force is 595, there is not enough funding available to fill 26 of these positions.

Question: What specific information can you provide as to the consequences of not filling these positions?

Answer: During 1986, we have had to close galleries in six of our museums a total of 246 times. This means that there was at least one gallery closed in one of our museums nearly every day. If we are unable to fill these positions, it will mean that this trend of closing galleries will continue.

Question: \$310,000 of the increase is to come from not having summer hours. Since this amount represents only 1.5% of the total Protection Services budget, why is it not possible to find another source or sources of funds to meet this need, rather than ending summer hours?

Answer: It would be misleading to look at the \$310,000 as being 1.5% of the OPS budget. OPS uses 82% of the budget for salary and benefit costs to provide security during normal museum hours and for nighttime security coverage. Of the other object costs of OPS 88% is used for annual orders, e.g., laundry, dry cleaning, uniform contracts, maintenance contracts, contracts for elevator and checkroom coverage, security upgrade program, etc. The \$310,000 represents over 74% of the remaining \$418,000 that does not have prior commitment.

Quadrangle Security Costs

Question: An increase of 11 workyears and \$372,000 is requested for the Quadrangle. What will be the total staffing level and related costs for the Quadrangle if this request is approved?

Answer: The total staffing level for Quadrangle Security requirements will be 69 positions and \$1,219,000.

Quadrangle Plant Services Costs

Question: P. 208. The request for the Office of Plant Services is \$37,505,000, an increase of \$1,881,000. For the Quadrangle, 7 workyears and \$145,000 is requested. If this request is agreed to, what will be the total staffing and related costs for Plant Services in the Quadrangle?

Answer: The request for the Office of Plant Services for the Quadrangle includes the Building Manager's operation. If the FY 1988 request is approved, the total staffing and related costs for each operation would be as shown below:

OPlants

15 positions (\$398,000) and support of \$58,000

Quadrangle Building Manager

44 positions (\$768,000) and support of \$153,000

Base Funding Needs for Office of Plant Services

Question: \$540,000 is requested for adequate base funds. On page 4, you indicate that it has been necessary to reprogram funds from other areas in each of the last five years to meet this office's needs. Provide a listing of the source and amount of funds reprogrammed for this purpose in the last five years, and how exactly they were used.

Answer: The following table lists the sources and amounts of funds used in each of the past five years to correct the Office of Plant Services deficit in its operating account and indicates the uses of those funds. Funds were drawn from the utilities and communications account once projections indicated that weather or other conditions were producing surpluses in that year. Amounts from the bureaus and offices were obtained in consultation with those units and/or were available subsequent to annual closedowns of procurement and contracting activity.

(\$000s)

<u>FY</u>	<u>Amounts made Available to Plant Services</u>	<u>Sources</u>		<u>Uses</u>
		<u>Utilities</u>	<u>Bureaus and Offices</u>	
1982	1,111	1,111	-	Supplies, materials, contract services, emergency repairs.
1983	524	524	-	Supplies, materials, contract services, emergency repairs.
1984	337	-	337	Supplies, materials, contract services, emergency repairs.

1985	507	368	139	Supplies, materials, contract services, emergency repairs.
1986	422	422	-	Supplies, materials, contract services, emergency repairs.

Question: Did any of these reprogrammings fall within the Committee's guidelines, requiring submission to the Committee and approval in advance?

Answer: We believe that advance Congressional approval was not necessary since the source of funds was predominantly from the utilities and communications account and, while those funds are managed independently from the Office of Plant Services operating budget, they are an integral part of that Office's line item.

Question: Are the ten utility system repair/operator employees for which \$290,000 in salary and benefit costs is requested already hired? How many such positions do you have in total throughout the Institution, and how many are currently filled?

Answer: The ten utility system repair/operator positions for which \$290,000 in salary and benefit costs is requested have not been hired. OPLANTS currently has a total of 117 positions approved for the 24 hour a day operation, maintenance and repair of the various HVAC systems which are installed in our over 5.1 million square feet of space. Of this authorized position ceiling, 101 are currently filled as of March 20, 1987.

Question: What are the major categories and costs included in the request of \$216,000 for supplies and \$20,000 for equipment? How much is currently available in the base for these purposes?

Answer: The OPLANTS FY 1987 base for supplies and materials is \$1.3 million and \$157 thousand for equipment. Actual expenditures for FY 1986 were \$1.5 million and \$150 thousand respectively. This spending level has been consistent for many years (adjusted for inflationary increases) and is expected to be about the same for FY 1987. As such, OPLANTS feels this funding level represents the cost of purchasing supplies, such as paint, wood, nails, filters, chemicals, oil, etc., and equipment such as vehicles, saws, sanding machines, and paint sprayers, which are necessary and essential in meeting their day-to-day responsibilities for the operation, maintenance and repair of the Institution's physical plant. Actual expenditures experienced in FY 1986 and before also represent funds spent for daily operations by on-board personnel. Since OPLANTS has had to carry approximately 30 vacancies each year due to its base shortage problem, expenditure levels can be expected to rise in FY 1988 if Congress approves our budget request since sufficient funds would finally exist to fill all positions. Also, OPLANTS has embarked upon a major Building Inspection Program in which each building will receive a detailed inspection to document needed maintenance and repair needs. While most of the documented needs will be met through other funding sources, such as the "R&R" allotment, the program is expected to increase the workload of OPLANTS trade and craft shops in making those minor type repairs which fall within their capabilities.

The approval of this request for an additional \$216 thousand for supplies and \$20 thousand for equipment will provide OPlantS with sufficient base funds to cover costs associated with having a full complement of approved positions on-board and cover additional costs associated with expected workload increases resulting from the new Building Inspection Program.

Question: What was the base cost of the contract for specialized inspection and maintenance of high voltage electrical equipment, for which an increase of \$11,000 is requested? Is the contract renegotiated annually?

Answer: The base cost of the high voltage inspection and maintenance contract for FY 1987 is \$70,000. In FY 1986 the base cost was \$40,000. In previous years our costs averaged around \$60,000. Our estimate for FY 1988 is \$72,000 based upon the base cost of 1987 adjusted by an expected 3 percent consumer price index increase. The contract was competitively bid in 1986 and was rebid in 1987 due to extensive contract specification changes. The 1987 contract has a clause which will allow the Smithsonian to exercise its option to renew the contract with the successful bidder for up to 4 years before the contract is competitively bid again. This clause was included in our effort to help reduce costs since we believe contractors will bid lower if they feel they stand a chance of having the contract in effect for a multi-year period thereby eliminating the expensive start-up costs associated with a new contract. The \$11,000 increase requested in FY 1988 will provide the necessary base fund to cover the difference between our estimated FY 1988 costs and the funds which currently exists in OPlantS' base for inspection and maintenance of the Institution's high voltage electrical equipment.

Question: Why is it necessary for Washington staff to travel to off-Mall sites such as New York or Panama to conduct inspections? Aren't there local operations and maintenance personnel that can conduct such inspections?

Answer: The operations and maintenance personnel at New York are OPlantS personnel. As such, it is necessary for supervisory and staff personnel from Washington to periodically visit and evaluate New York operations to insure that OPlantS programs and procedures are being followed. These visits should be conducted quarterly but have not been due to insufficient travel funds. These visits not only will verify that operational and maintenance functions are being properly performed but are used to assist in problem solving, employee counselling and employee rating functions. All of these activities are part of the overall management responsibility. The visits to Panama, usually once a year, will be used to evaluate the success of their operations for top level Smithsonian personnel and provide consultative services to the Panama operations to help solve problems and assess maintenance requirements. While much can be accomplished through correspondence and over the telephone, annual visits have proven to be the best means of assuring that operations are using the most efficient and effective new procedures available. The increase of \$3,000 in travel funds will insure that funds are available to OPlantS to perform these much needed oversight visits.

Quadrangle Horticultural Costs

Question: 1 workyear and \$40,000 is requested for maintenance of the Enid A. Haupt Garden in the Quadrangle. Last year, \$20,000 was included in the

budget to erect greenhouses for the garden. Have the greenhouses been completed? If so, what use will be made of the \$20,000 in FY 1988?

Answer: With the funding provided in FY 1987, the four Victorian greenhouses are in the process of being erected. During FY 1988, this funding will be used for the purchase of equipment and furnishings for the greenhouses. For FY 1989 and following years, this funding will support the annual maintenance, upkeep and repair of the greenhouse structures. These maintenance requirements are particularly important since these greenhouses, dating from the late 19th and early 20th centuries, require more attention than more modern structures.

Question: What is the total staffing and dollar base that will be available to maintain the horticultural collection in the Quadrangle, if the request is agreed to?

Answer: If the FY 1988 request is approved, the total staffing and dollar base to maintain the horticultural collection in the Quadrangle will be 6 workyears and \$212,000.

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

Question: P. 217. The request for construction and improvements at the National Zoo is \$5,150,000, an increase of \$2,650,000 over 1987. Last year, you stated that the estimate for the cost of the Master Plan program was \$81.1 million; now it is estimated at \$101.5 million. Please explain the reason for the increase in the total estimated cost of the Plan.

Answer: Last year's estimate of \$81.1 million was calculated prior to the completion of the Revised Master Plan, November 1986. The current estimate of \$101.5 million (compared with the \$81.1 million estimate) reflects changes in the scope of several projects, cost escalations, changes of estimated construction dates, and moving projects to the out-years. The original Master Plan had a cost estimate of \$118,000,000 in 1974 dollars; and our current estimate of \$101,521,000 is calculated in 1986 dollars at a lower cost than the original Master Plan estimate.

Olmsted Walk

Question: \$2.6 million is requested for Phase III, the final phase, of the Olmsted Walk renovation and improvement project. Has design been completed for this phase of the project?

Answer: The design is in progress and completion is scheduled for August 1987.

Question: What will the total cost of the project be, with this third phase?

Answer: The total cost estimate for the three phases is \$5,912,000. An additional \$740,000 is scheduled in FY 1989 to support a full landscaping program for Olmsted Walk.

Renovation and Repairs Projects

Question: \$1,800,000 is requested for renovation and repairs at Rock Creek, and \$750,000 for Front Royal. Can you provide a list of the major projects or categories expected to be accomplished within these amounts; and a list of the actual projects accomplished in FY 1986, and currently planned for FY 1987?

Answer: The major projects are listed below.

Renovations and Repairs at Rock Creek

FY 1986:

HVAC repair
Gray Seal Filter renovation
Renovation to basement of Reptile House
Design Wetlands renovation

FY 1987:

HVAC repair
Replace PCB transformers
Wetland renovation
Hardy hoof renovation
Elephant House renovation

FY 1988:

Outdoor Flight Cage renovation
Replace high voltage feeder
Bald Eagle/Crane/Ostrich Exhibit
renovation
Panda House renovation
HVAC repair

Renovations and Repairs at Front Royal

FY 1986:

Replace Juvenile Bird Yards
Repair fencing, Mountain Ridge Road
Mead Barn renovation
Repair roofs (Bldgs. 15, 16 & 17)
Rivinus Barn renovation
Fire protection system renovation

FY 1987:

Replace roof, Greenhill Barn
Rewire Admin. Bldg.
Replace siding, various buildings
Road repairs
Dormitory renovation
Replace wells (Bldgs. #54 and #58)

FY 1988:

Insulate Bldgs. 13 & 14
Renovate hooped stock buildings
Renovate four residences
Repair fencing (Long Field)
Renovate 200,000 gal. (Reservoir
Animal Facility)

Question: Why is the amount requested for Front Royal increasing from \$351,000 in FY 1987?

Answer: The plant property at Front Royal is valued at over \$75 million and one percent (\$750,000) is the minimum level necessary to carry on an effective maintenance management program. The \$351,000 request, presented to Congress for FY 1987, was the level reached after internal SI deliberations during the budget formulation process. The amount of \$750,000 requested for FY 1988 is the required level to ensure maintenance and support of all new and renovated facilities at Front Royal.

RESTORATION AND RENOVATION OF BUILDINGS

Question: \$655,000 is requested for General repairs and improvements. Why is it necessary to increase the amount available for emergency repairs to \$100,000, from the \$50,000 made available in FY 1987?

Answer: Over the past five years, funds allocated for emergency repairs have not been sufficient for a physical plant of 5 million square feet. Within the very tight appropriation for restoration and renovation work, funds have had to be drawn from other areas of the account to meet emergencies.

Question: What has been the actual expenditures for emergencies in the past three years?

Answer: Actual expenditures for emergency repairs for the past three years are as follows: FY 1984 - \$149,200; FY 1985 - \$165,200; FY 1986 - \$102,244.

Question: \$40,000 is included for the road leading from the current base camp to the Whipple observatory in Arizona. Will this portion of the road continue to be used once the new base camp is built (funds are included for this purpose in the Construction appropriation)?

Answer: Yes, this portion will continue to be used as the sole connection between the new base camp and observatory on the mountain.

Question: \$50,000 is included for a road at the Garber facility in Suitland. What is the basis for the need for improved security, which is the basis for this road to be built inside the perimeter fence at the facility?

Answer: Due to potential intrusion of vandals through the fence, a road is necessary for Protection Services vehicles to patrol the perimeter.

Facade, Roof and Terrace Repairs

Question: P. 220. \$1,980,000 is requested for Facade, roof and terrace repairs. What are your plans for the National Air and Space Museum plaza surface replacement project?

Answer: The plan is to replace the plaza surface in future years. Funds will be requested for the initial phase of construction in FY 1989. Total funds for the project are currently estimated at \$3,820,00. The actual construction work will be accomplished in phases to diminish interruption during peak visitor periods.

Question: \$50,000 is requested to begin replacement of the roof of the Carnegie Mansion at the Cooper-Hewitt Museum. What is the total expected cost of this project? How long will it take to complete?

Answer: The current estimate for construction is \$275,000 and is expected to take 14 months to complete.

Question: Will the longer term construction project at the Cooper-Hewitt have any effect on this project?

Answer: The roof project is directed to the Carnegie Mansion which is not included in the scope of work for the major renovation.

Question: Why is \$300,000 needed for design of the plaza surface replacement project at the Hirshhorn? What is the current estimated total cost of this construction?

Answer: The \$300,000 requested will be used for architect/engineer design fees and construction management fees, as well as soils and structural testing. The total estimated cost of construction is \$2,400,000.

Utility Systems Repairs and Improvements

Question: P. 226. The request for Utility systems repairs and improvements is \$5,560,000. Included is \$1,600,000 for HVAC upgrading in the American History building. When was \$1.4 million reprogrammed from the HVAC project at the American Art and Portrait Gallery building? When do you expect to replace those funds?

Answer: In FY 1986 funds were reprogrammed from the HVAC project at AA/PG. At this time, with the uncertainties of the General Post Office Building, the future need for funds for HVAC work at the AA/PG cannot be defined in detail.

Question: You indicate that \$54.5 million will be needed for utility improvements at the Natural History building. Over what timeframe do you expect to carry out these improvements?

Answer: The phased implementation of the utilities improvements at the Natural History Building will be carried out over 14 years.

Question: What is the basis of the estimate, and how current is it?

Answer: An engineering report was prepared by an A/E firm in 1985. Cost estimates are in 1986 dollars and are escalated from 1989 through completion.

Question: How exactly will the \$475,000 requested in 1988 be used?

Answer: The \$475,000 will be used for a design contract for the first phase of construction.

SERC-Edgewater Facilities

Question: P. 230. The request for other projects is \$2,724,000. Included is \$175,000 for a technical instrument support shop at the Environmental Research Center on the Chesapeake Bay. Why couldn't this facility be built within the \$862,000 transferred from the salaries and expenses account last year?

Answer: The Instrument Shop is a separate facility unrelated to the lab wing and the current estimates based upon the project scope could not be funded within the existing \$862,000.

STRI Facilities

Question: \$220,000 is requested for a new docking facility on Barro Colorado Island. Will the old dock be retained? If so, what will it be used for?

Answer: The old dock at Barro Colorado Island will be renovated to serve as a dock and boat house for the fleet of small outboard motorboats used by scientists, game wardens, and other personnel.

Question: \$75,000 is also requested for a paved road to provide access and circulation to the new buildings being built on BCI. How long will this road be? From where will it provide access to the new buildings?

Answer: Rather than a vehicular road, the plans provide for a paved pathway for pedestrian traffic and for the transport of supplies and materials. It will be 850 feet long and will be the only route for circulation among the dorms, kitchen/dining facilities and the dock area. The pathway will also provide slope stability and reduce erosion, and associated sedimentation accumulation in the nearby lake.

SAO Whipple Observatory Facilities

Question: \$800,000 is requested for a new dormitory at the Whipple Observatory. How does the space planned for this facility compare with the existing facility?

Answer: The new space is fire proof and can accommodate three additional staff scientists.

Question: Has the new site been thoroughly checked to ensure there will be no future problems with it? How close is it to the Telescope, and to the current dormitory facility?

Answer: Thorough site investigations were conducted to insure that all potential problems could be avoided. The site is 2400 feet from the Telescope and 400 feet from the existing dormitory.

Question: What is the cost per square foot of the new dormitory? Provide a breakdown of the cost estimate of \$800,000.

Answer: The current cost estimate of \$800,000 for construction averages \$200 per square foot which comprises labor, material, overhead, profit and contingencies, and reflects the additional costs of construction at this remote location.

Detail of Construction Estimate
(exclusive of design which was funded in FY 1987)

	<u>Estimated Cost (\$000)</u>
Building Construction	445
Site Improvements	190
Escalation (14%, to midpoint of construction period)	90
Construction Contingency (10%)	<u>75</u>
Total	800

Question: Are any funds included for equipment or furnishings? Do you intend to use the items available in the existing dormitory? If so, how much will be available, and what additional will need to be provided?

Answer: Funds for furnishings and equipment were not included. Most of the furnishings in the existing dormitory are in poor condition and will not be used. Some furniture will be assembled from other locations and the balance will be purchased.

Structural Analysis of SI Building

Question: \$100,000 is requested to begin a comprehensive structural analysis of the Smithsonian Institution Building. Why are you proposing to phase the funding for this study, with the remaining \$50,000 to be sought in FY 1989?

Answer: The funding is being phased to accommodate the OMB reduction to the R&R request.

Funding for Advanced Planning and Design Costs

Question: \$329,000 is requested for advanced planning and design funds. Why are you increasing these funds from the level received in 1987 of \$200,000?

Answer: Given the increased magnitude of recent projects and greater emphasis on master plans and definitive programs, more work must be performed by A/E contracts. In addition, funds are needed to inspect building components to determine future repair and renovation requirements.

Question: Provide a breakdown of designs, including costs, completed in FY 1986; and those now planned for FY 1987.

Answer: The actual FY 1986 use of the funds was as follows:

1. Design NASM Terrace Repairs	\$43,955
2. Term contract work orders for estimates.....	\$42,578
3. STRI Topographic Study	\$ 1,500
4. Design NMAH Mezzanine Improvements.....	\$15,000
5. Study SERC Sewer Treatment	\$10,000
6. Design NMAH Phase I Implementation Plan.....	\$ 3,900
7. Design OIRM Computer Room Improvements.....	\$20,275
8. Design Renwick Gallery Roof Repairs.....	\$ 7,792
9. Prepare Hirshhorn Museum Master Space Plan.....	\$55,000
Total	\$200,000

The planned FY 1987 use of the funds is as follows:

1. Design SAO Ridge Dormitory	\$ 20,000
2. Design AA/PG Attic Repairs	\$ 20,000
3. Design NASM Facade Repairs	\$ 50,000
4. Design NMNH/ADP Center Improvements	\$ 30,000
5. Design SERC Sewage Treatment System	\$ 10,000
6. Design NASM Window Replacement	\$ 15,000
7. Design SI Library Improvements	\$ 15,000
8. Design Phase I NMAH Implementation Plan	\$ 40,000
Total	\$200,000

CONSTRUCTION

SAO Whipple Base Camp

Question: P. 224. The request for construction is \$4,470,000, for the Whipple Base Camp. What was the amount authorized for this project in P.L. 99-423?

Answer: The authorization is for \$4,500,000.

Question: Is the design complete? If not, when will it be, and what is the basis for the estimates at this time?

Answer: The design funds are included in the request for FY 1988. If the request is approved, the design of the base camp will be completed by the end of FY 1988. The design of the road will be completed separately so that construction can begin during FY 1988, as construction of the base camp cannot begin until access is provided to the site. The project estimate is derived from the recent Master Plan program requirements.

Question: What is the status of the negotiations with the Forest Service for acquisition of the site?

Answer: The Forest Service approved the use of the land on February 2, 1987. The decision is currently in the statutory appeal process, and no delays to the project are anticipated.

Question: When will the master plan for the base camp be completed?

Answer: The Master Plan for the base camp will be completed by September 1987.

Question: Will the road included in this construction be used by any other users? If so, is there any proposal for sharing the cost of construction? What is the basis for the cost estimate of \$1,250,000?

Answer: Users will include visiting scientists and scholars, tourists, Forest Service and Smithsonian personnel and local ranchers. Since this road is primarily for the benefit of the Smithsonian and its visitors there is no possibility for cost-sharing of the construction itself. The completed road will be turned over to the counties for maintenance and repair. The estimate is based upon engineering data for four miles of new paved road and three miles of upgrading to existing road.

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