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SMITHSONIAN INSTITUTION MUSEUM SUPPORT FACILITIES

GOVERNMENT

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HEARING
BEFORE THE
SUBCOMMITTEE ON
PUBLIC BUILDINGS AND GROUNDS
OF THE
COMMITTEE ON
PUBLIC WORKS AND TRANSPORTATION
HOUSE OF REPRESENTATIVES
NINETY-FIFTH CONGRESS
SECOND SESSION
ON
S. 1029
TO AUTHORIZE THE SMITHSONIAN INSTITUTION TO CONSTRUCT
MUSEUM SUPPORT FACILITIES

AUGUST 14, 1978

Printed for the use of the Committee on Public Works and Transportation

DOCUMENTS



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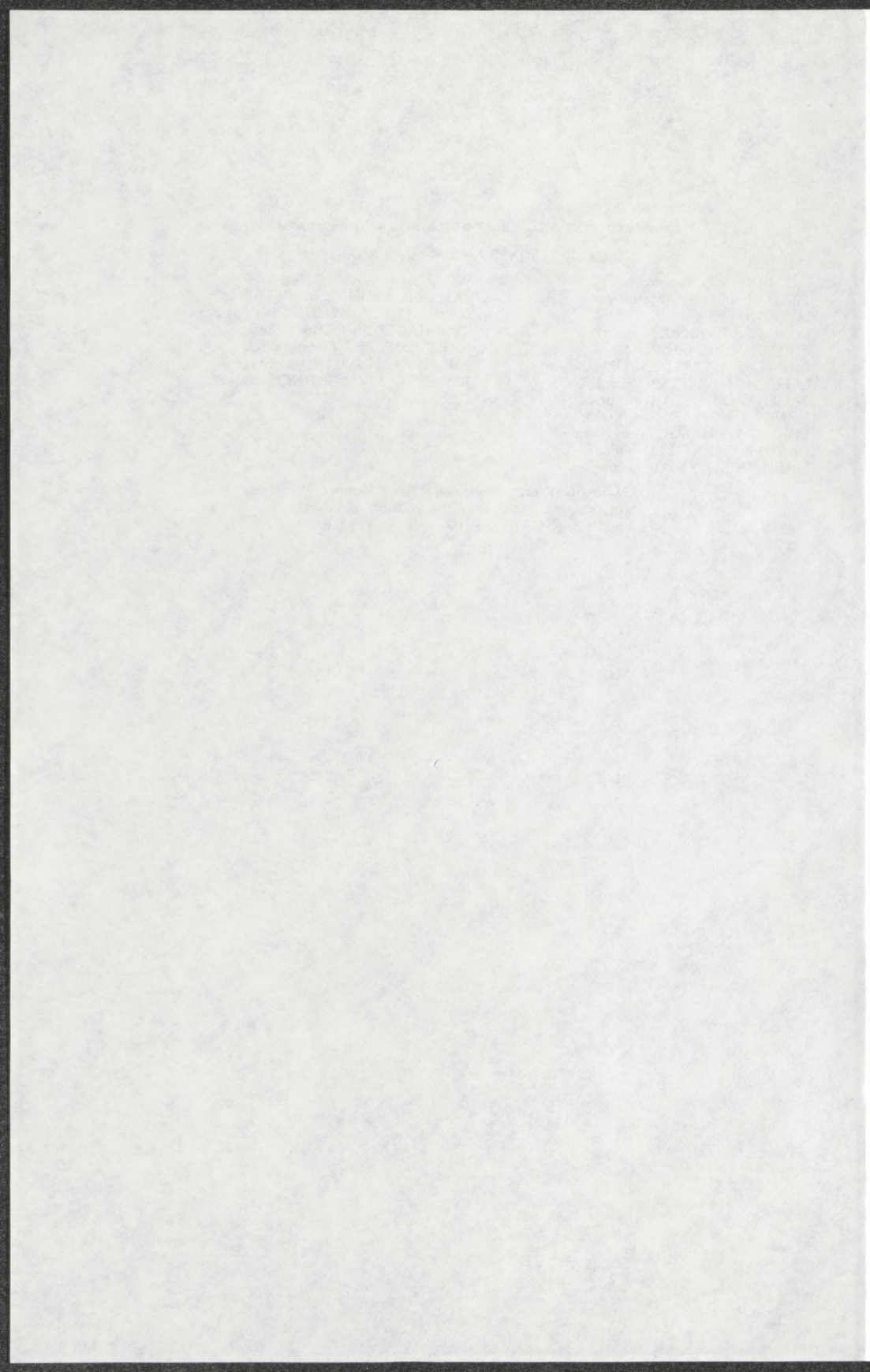
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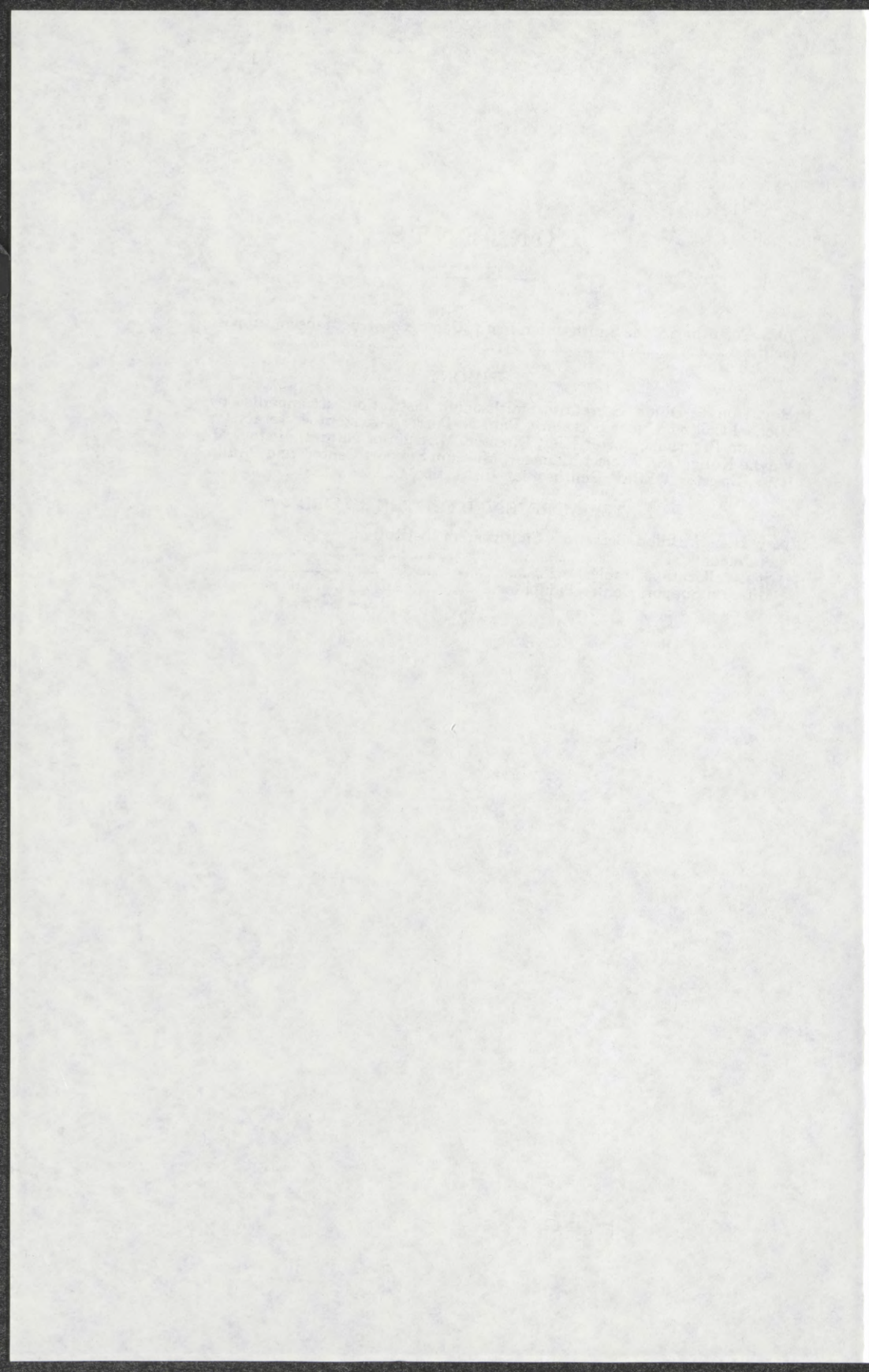
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TESTIMONY

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S. 1029

IN THE HOUSE OF REPRESENTATIVES

MAY 10, 1978

Referred to the Committee on House Administration

MAY 11, 1978

The Committee on House Administration discharged and referred to the Committee on Public Works and Transportation

AN ACT

To authorize the Smithsonian Institution to construct museum support facilities.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That (a) the first section of the Act entitled "An Act to
4 authorize the Smithsonian Institution to plan museum sup-
5 port facilities", approved September 19, 1975 (Public Law
6 94-98), is amended by inserting ", and to construct,"
7 after "to prepare plans for".

8 (b) Effective October 1, 1978, section 3 of such Act is
9 amended to read as follows:

10 "SEC. 3. There is authorized to be appropriated to the

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1 Smithsonian Institution \$21,500,000 to carry out the pur-
2 poses of this Act. Any portion of the sums appropriated
3 for such purposes may be transferred to the General Serv-
4 ices Administration which, in consultation with the Smith-
5 sonian Institution, is authorized to enter into contracts and
6 take such other action, to the extent of the sums so transferred
7 to it, as may be necessary to carry out such purposes.”.

Passed the Senate May 9 (legislative day, April 24),
1978.

Attest:

J. S. KIMMITT,

Secretary.

SMITHSONIAN INSTITUTION MUSEUM SUPPORT FACILITIES

MONDAY, AUGUST 14, 1978

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON PUBLIC BUILDINGS AND GROUNDS
OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION,
Washington, D.C.

The subcommittee met, pursuant to notice, at 1:45 p.m., in room 2167, Rayburn House Office Building, Hon. Norman Y. Mineta (chairman of the subcommittee) presiding.

Mr. MINETA. The subcommittee will please come to order.

Today, since we have Secretary Ripley here, I think we would like to go ahead with the Smithsonian Museum Support Center. On this subject we have three bills pending before us, H.R. 6086, H.R. 8991, and S. 1029.

The first two bills are identical. The third bill, S. 1029, has been amended by the Senate to add the standard language granting the Smithsonian transfer authority to the General Services Administration, which is the same mechanism as was used to construct the National Air and Space Museum.

S. 1029 passed the Senate on May 9. The concept of a Museum Support Center has been pending before the Congress for 10 years. Beginning in fiscal year 1975, routine appropriations to the Smithsonian have provided additional sums through fiscal year 1979 for planning this project.

Now we are at the point of considering whether or not to authorize construction. On the subject of museums, I might just note that historically the Smithsonian did not seek to serve as America's national museum, but nobody else was playing that role and the Smithsonian was drawn into it somewhat reluctantly.

The popular appetite for a national museum has continued to grow and we have been hard-pressed to keep up with it. The newest addition to the Smithsonian's museum, the National Air and Space Museum, has been attracting 10 million visitors a year for its first 2 years, making it the most visited museum building in the world. Obviously the American people want a national museum, and they have found it in the Smithsonian. I think the Smithsonian is to be commended for having fulfilled the need very capably.

Mr. Walsh, do you have any opening remarks at this time.

Mr. WALSH. Thank you, Mr. Chairman.

I welcome Mr. Ripley and his staff, and take this opportunity to commend you and your fine staff for the outstanding contributions made through the Smithsonian Institution. I look forward to asking a number of questions regarding the museum support facility.

I took a personal tour of the site that you are planning to place this on. I agree that we do have some problems with storage and conservation and other plans. I have looked at the facility. I have discussed the problems that the institution is experiencing with Mr. Perrot and with several other people.

It appears to me to be a necessary expense that the government is going to have to undertake if it is going to proceed with the Smithsonian as it wants to, but there are a number of details that will need clarification. I look to clear those up during the course of this hearing.

Thank you, gentlemen.

Mr. MINETA. Our witness today is S. Dillon Ripley, Secretary of the Smithsonian Institution. Secretary Ripley is accompanied by Michael Collins, Under Secretary of the Smithsonian, Paul M. Perrot, Assistant Secretary for Museum Programs, Porter Kier, Director of the National Museum of Natural History, and J. Wayne Kulig, GSA Project Manager for the Museum Support Center.

So Secretary Ripley, if you would go ahead and proceed in your own fashion.

TESTIMONY OF HON. S. DILLON RIPLEY, SECRETARY, SMITHSONIAN INSTITUTION, ACCOMPANIED BY MICHAEL COLLINS, UNDER SECRETARY; PAUL N. PERROT, ASSISTANT SECRETARY FOR MUSEUM PROGRAMS; PORTER KIER, DIRECTOR, MUSEUM OF NATURAL HISTORY, J. WAYNE KULIG, GSA PROJECT MANAGER, MUSEUM SUPPORT CENTER, AND PHILLIP REISS, DIRECTOR, OFPEF, SMITHSONIAN INSTITUTE

Mr. RIPLEY. Thank you very much, Mr. Chairman.

May I say what a rare pleasure it is for us to be here today and to have the opportunity to appear before your subcommittee.

The Smithsonian, as you very rightly say, during its long history did not originally seek to become a museum directly, the nation's attic as it is sometimes called popularly. In fact, my first predecessor fought quite hard to suggest to the Congress that it was not really necessary that this institution for the increase and diffusion of knowledge, operating with a slender budget, should indeed be a museum center. However, I have a prepared statement here today, Mr. Chairman, which I would like to present for the record and extemporize, if I may, a little bit around the subject and then ask my colleagues at the table who are very highly qualified in this respect, to answer the keen questions which I know your committee will have.

Mr. MINETA. Without objection, your full statement will be made a part of the record at this point.

[Statement referred to follows:]

STATEMENT OF S. DILLON RIPLEY, SECRETARY, SMITHSONIAN INSTITUTION

Mr. Chairman and Members of the Subcommittee:

It is a pleasure for me to testify before you today in support of S. 1029 which would authorize the Regents of the Smithsonian Institution to construct a museum support facility on Federally-owned land in the Washington metropolitan area.

The purpose of this structure—the first of its kind in America, and perhaps the world—is to permit the Institution to meet its responsibilities to house, preserve and make available for scholarly research the millions of items which comprise the collections under its care. At the same time, this building would allow us to expand the public exhibit space available within the National Museum of Natural History and to undertake a training program for museum conservators whose services are in short supply everywhere.

But it is the national collections—from dinosaur bones to airplanes to postage stamps—which are of greatest concern to us. In fulfilling its legislated responsibility for the “increase and diffusion of knowledge among men”, the Institution has for 132 years collected physical information about our world, before and since the coming of mankind. This is, of necessity, a continuing activity. The collections which the Smithsonian preserves, authenticates, restores, studies and exhibits comprise the greatest record in the world of man’s culture and creativity, and the diversity of our planet. As more and more of the earth’s space is bulldozed and paved, as civilizations emerge and disappear, as the face of the globe itself changes, museums such as the Smithsonian must intensify their efforts to gather and preserve those objects which help us to understand the forces of nature and of humanity which shape the present and the future.

The growth of the Institution’s collections are controlled, of course, and in September, 1977, the Smithsonian completed an extensive study of its collections management practices and policies. A copy of that study has been furnished this Committee. Since then, the Institution has done still more to ensure that its collections grow at a manageable rate and that existing collections are reviewed on a continuing basis.

The selective growth of the collections is an essential part of the Smithsonian’s mission. Even with our strengthened guidelines, however, the rate of growth over the past two decades has averaged about one million objects and specimens a year.

This growth has been particularly acute in the natural sciences. Today, these collections overflow into corridors, stairwells and former exhibition spaces of the Natural History Museum. We have been forced to close approximately 40,000 square feet of museum exhibit space, once open to the public, to store collections. Curators and visiting scholars must work in cramped and poorly ventilated areas. Objects such as animal skins, wooden artifacts and bones are stored under conditions which hasten their deterioration.

In addition to the requirements of the natural science collections, space is also needed for the Smithsonian Oceanographic Sorting Center, which sorts and identifies specimens; the strengthening of the Smithsonian’s conservation program; and the Museum of History and Technology’s collections of objects related to our development as a Nation and a culture.

Conservation is an example of an essential museum service now severely hampered by crowded laboratory and work spaces in Smithsonian museums. The construction of the Support Center will provide space for development of conservation programs to protect, restore and preserve paintings, sculptures, paper, bones and all the other materials represented in the collections; and to assist museums in other parts of the country in solving their conservation problems through new techniques and training for conservators.

America’s museums have documented and testified to the need for many more conservators than are being trained today. Few of these more than 5,000 museums have conservation programs adequate to preserve the objects and artifacts which are in their care. It is estimated that even with substantially improved support and the expansion of all the existing training programs in the United States, the number of new conservators trained in the next ten years will be fewer than those needed to replace conservators leaving the profession and to fill expected new positions.

The Institution’s conservation training program will be developed in conjunction with the Smithsonian’s own laboratory facilities and the conservation staffs and laboratories of our museums. The facilities at the Support Center will be designed to maximize efficient treatment of the national collections and permit extensive training opportunities for those at the highest level of conservation science, as well as those at the vital technician level.

In the past it was possible to construct new museum buildings on the Mall and to expand existing ones. However, only one complete building site remains on the Mall, and we share with the Congress the belief that it should be preserved for direct public use and enlightenment. We are convinced that the establishment of an off-Mall museum support center will provide the best solution to our current space problems.

The Institution's experience of the past twenty years, developing and operating a depository and shop facility at Silver Hill, Maryland, to supplement some Mall activities, has demonstrated the feasibility of concentrating additional storage, research, study and conservation efforts there. The present facility, devoted primarily to the Air and Space Museum, has been developed with one-story, prefabricated metal buildings with high ceilings and open interiors. It is best suited to the preservation and study of large air and space craft, activities which will be continued there.

The location of the proposed Museum Support Center is adjacent to the existing facility, 6½ miles from the Smithsonian Institution building. The two units will share a number of operational services such as security, maintenance, and transportation.

The General Services Administration has included the Smithsonian's need to expand its support facilities in the Master Plan concept for the development of the Suitland Federal Center. That concept contemplated the transfer, which has now been completed, of 82 acres of various parcels of land adjoining the Silver Hill facility, including a buffer zone of wooded areas adjoining the Suitland Parkway.

Several boards or commissions having interests in the development of the area have reviewed the General Service Administration Master Plan Concept. The Prince George's County Planning Board at its meeting on January 30, 1974, endorsed the recommendation of its staff and recommended the concurrence of the Maryland National Capital Park and Planning Commission, which was granted at a meeting on February 13, 1974. The National Capital Planning Commission at its meeting on March 7, 1974 endorsed the Smithsonian portion of the Suitland Federal Center Master Plan Concept.

As the Museum Support Center develops it will include activities of interest to visitors, and the staff will collaborate with local schools, as is the Smithsonian practice, to enhance instruction in science, history, and art.

We envision the Museum Support Center as a special purpose structure designed to meet the needs of the national collections for storage, retrieval, conservation, and preservation. The building will be unique in this regard, and we hope that our experience with it will provide a model for other institutions responsible for collections of scientific and historic significance.

Our estimates provide for a building totalling approximately 338,000 gross square feet. Of that sum, approximately 254,000 net useable square feet will be available for programmatic purposes. We will allocate 37,000 net useable square feet for laboratories; 57,500 for offices and workrooms; and 160,000 for collections management and utilization space. Within the latter allocation 147,000 net useable square feet will be assigned to the National Museum of Natural History; 10,000 to the National Museum of History and Technology; and 2,300 to other units.

The staff of the Natural History Museum currently plans to transfer the following percentages of its collections to the Center:

- Anthropology 95%
- Botany 25%
- Entomology 60%
- Invertebrate Zoology 20%
- Mineral Sciences 50%
- Paleobiology 20%
- Vertebrate Zoology 20%

Relocation of these collections will release space for exhibition and avoid further encroachment on it, thereby enhancing the Museum's ability to serve an increasing audience which now numbers about five million visitors a year. Other benefits include relieving crowded and hazardous conditions in the Museum; making collections more accessible in the new structure; improving interdisciplinary research relationships; providing a stable environment for objects and specimens in order to reduce the rate of disintegration and achieve long-term preservation; and eliminate space rental payments of approximately \$200,000 annually for the Sorting Center.

Development of the support center concept has been undertaken primarily by the Smithsonian staff, although assistance from outside sources has been sought from time to time. In fiscal year 1967 \$22,700 was spent for a feasibility study that considered the project in the context of storage only. Internal analyses through the years advanced the current concept, and in fiscal year 1974 \$35,000 was expended for additional site and conceptual studies. In fiscal year 1975 an appropriation of \$75,000 for preliminary planning was received. A portion of this money was devoted to a survey of academic and industrial sites here and abroad to study the latest systems and methods in the management and retrieval of collections and inventories, and the

remainder was used for advanced planning studies that emphasized building design to optimize relationships among collections, research and conservation.

\$325,000 was appropriated in FY 1978 to initiate planning and design, and Congress has recently approved our FY 1979 request for an additional \$575,000 for the same purpose.

Our friendly and cooperative experience with the General Services Administration in construction of the Hirshhorn Museum and Sculpture Garden and the National Air and Space Museum have, quite naturally, led us to seek its counsel in the development of this project. We are currently negotiating an agreement with GSA to provide technical and management services for final planning and design.

Our needs will continue to be studied carefully and refined to insure that the final plans provide for a facility which does, indeed, fulfill our space and systems requirements. Among the latter are, of course, those for security and fire alarm and suppression. In addition, however, the building must have a filtration system to control dust and other contaminants and a climate control system that will allow us to maintain a year-round temperature of 68°-72°F with a relative humidity in the range of 45% to 55%. These systems, within the structure we propose, will dramatically increase our ability to protect and preserve the collections with which we have been entrusted.

GSA has provided preliminary cost estimates which indicate that a facility containing the amounts and types of space required, as well as these special systems, can be constructed for \$21.5 million or \$63.60 per gross square foot.

Mr. Chairman, legislation for the purpose now under consideration was initially introduced in 1968. Time has increased rather than mitigated the dimensions of the Smithsonian's requirements, but it has also provided us with an opportunity to analyze more carefully their nature and to find a more precise response to the problems they pose. I respectfully ask your approval of S. 1029 to authorize construction of the Museum Support Center to meet the Smithsonian's most pressing needs and assist in its responsibilities for the development, conservation and use of the national collections.

Mr. RIPLEY. Thank you very much, sir.

It may seem odd that we are coming to the Congress in this time of stringency, fiscal stringency, to request an addition which for us is of such magnitude, \$21.5 million, to construct a museum support facility.

How can it be, many of you may ask, that with these massive buildings on the Mall, we require a museum support facility? It may seem almost farcical to contemplate, especially if you think in terms of the storage of objects.

I have spent a long number of years, first at a kindred university where I was in charge of a museum, and also here for nearly 15 years at the Smithsonian trying to study manners in which two things can be done. On the one hand, one acquires objects; on the other hand, one attempts to display and work on these objects for the edification and the enlightenment of people everywhere; in our case, primarily for Americans, but for the citizens of the world.

Now these objects we have recently discovered—in the past 20 years or so, because we were beginning to be concerned about this before I came here—are very fragile. They do deteriorate at a known rate. But that rate has been increasing greatly with the increase in smog, pollution, vehicle emissions, all the things that have to do with creating an urban center such as this city or any other large center, in which these chemical influences in the air inevitably affect the objects, some of which are very old and many of which, even though relatively younger, deteriorate rapidly.

We brought along today some material from the West Coast, some Indian material which gives a good contrasting presentation, on the one hand a basketwork figure of Indians which has been stored in a

drawer in the Natural History Building, which has been attacked by rodents and insects, because it is one of so many hundreds of thousands of similar objects; the other, a basket, better preserved because by good fortune it was kept in a better kind of case structure.

As the museum has grown, and this particularly involves the Natural History Building, over the years since it was opened just at the end of World War II, as that museum has grown, more and more of the collections have objects that have had to be stored in areas which are unsuitable, which were not originally designed for it. And more recently, as we discovered about climate control, conditioning of the atmosphere, filtration, electrostatic processes to try to keep out the dust and the chemicals which affect these objects, we have become more concerned that we are in fact presiding over an attic in the popular sense, an area of inevitable deterioration and disintegration. We obviously cannot afford to do that, nor can the American people assume that we have accepted this mandate and that we are opening under the appropriate and proper terms.

Far be it from Americans to be presiding over a heap of moldering rubbish. If indeed these objects, kept in this museum, are to turn out to be better prescribed for landfill, then I am afraid we have signally failed you gentlemen and the American people. So we have come over the past 10 years, since 1968, when we first began planning for this support facility, to a moment of truth.

We have brought and refined plans and replanned; we have been closely in touch with the GSA, with whom we have a harmonious relationship, at the working and planning levels for the construction of our museum facilities. We have had the clearance of the Office of Management and Budget, and I think we have the full confidence of the American people.

As you mentioned, Mr. Chairman, this is indeed a worthy cause and this subject is not one that can be neglected. If we are to preside over exhibits which are ever more important and ever more exciting to Americans, we must work more than hard, we must work desperately hard to try to live up to that responsibility.

I view it as a singularly important moral obligation that in this country today we preserve the testaments of the past. In recent years history has not been as popular a subject as it was years ago when I was at school. History has declined in importance in many ways.

Those members of Congress who are relatively over the age of 30 I think are aware, as I am, of the importance of history. But often the younger people today have been instructed by sociologists who have taken away from a mysterious characteristic of history, which is the sense of time. If you lose the sense of time, you lose somehow an appreciation of history. It is coming back now and I think it is one reason why Americans thronged our museums and the other museums in this country so eagerly to make up for lack of knowledge, often left out in their school training, but which can be demonstrated by objects which testify to the passage of time.

So, given the importance and the significance of these objects, we come to a subject which is of transcending importance today; that is

the subject of conservation. Who are we to assume that these objects, once collected, ticketed, documented, placed in a drawer, will remain the way they are?

As I have referred earlier, we are beginning to learn that this is a fatal mistake and that these objects deteriorate at a known and increasing rate. So conservation is one of the elements in the design and construction of this building which we feel will be well nigh unique, which is of transcending importance. Conservation, ranging from the static quality of the placing of these objects in properly controlled and filtered air, to the assiduous work that must be done by our conservation experts in studying deterioration of these objects, is of the greatest need. That is why the building is quite sophisticated. That is why it is an important building and a relatively expensive building.

I see the figure quoted here of \$63.60 for a square foot. That may seem like a farcically high building to people who do not know how important it is to house these objects in the requisite structure which is protected.

Also, we must have laboratories where the conservation and education and research people can work so that they can work with these objects. For our own philosophy is, indeed, that objects are of much less value if they are not properly worked with, as well as merely being stored against the future.

Many of the objects in this building-to-be are from the Natural History Museum. In fact, most of them are. Only a small quotient will be from the Museum of History and Technology. But the Museum of Natural History has by far the largest responsibility in terms of numbers of objects in our total collections.

So therefore, it is extremely important that we attack, first, this problem which has managed to confound our museum curators over the years, so much so that some 40,000 square feet of exhibit space in that original museum is now crowded out and full of stored objects.

We cannot go on, I maintain, Mr. Chairman, endlessly putting off the construction of this resource. It is one in which to surrender the responsibility for construction would be to abnegate our responsibility which is chartered by the Congress to conserve and preserve the national collections.

If we are to continue this way, we will have behaved reprehensibly and I, for one, could not speak to you in this hearing today without saying that I would not only be irresponsible but I would be not doing my job if I were not able to bring home to you the significance and the priority which we attach to this work.

I feel most seriously about it and I feel I am charged by my regents and by the staff with presenting to you the fact that this is a moral obligation for this institution. We have the land. The land has been transferred to us. We have the concurrence of GSA in the planning; we have a refined plan which we have been working on for 10 years.

The other House has agreed and passed the bill this time. It is, as you know, in our own work, difficult to appear before major committees of this House, because our needs are so relatively small in the total composite of government appropriations and authoriza-

tions. Therefore, I urge, in fact I plead with your committee, Mr. Chairman, that you will consider favorably this bill, and that you will assist us in performing the task with which we are so seriously charged.

Thank you very much.

Mr. MINETA. Thank you very much, Mr. Secretary.

Mr. Secretary, what is the total building space under the control of the Smithsonian presently? And how does that break down among the various functions?

For example, how much for public exhibit area, for storage, for scientific research, and so on?

Mr. RIPLEY. We can give that to you, Mr. Chairman, for each individual building or we can give it to you collectively for all of our storage. I think perhaps Mr. Perrot would be better able to answer this specific question than I because he is the Assistant Secretary for Museum Services.

Mr. MINETA. Very well.

Mr. PERROT. Thank you, Mr. Chairman.

The net usable square feet of museums, galleries and other owned facilities in the Washington metropolitan area is 2.956 million. This includes about 1.282 million square feet of exhibits and collection space, 840,000 storage space, and 825,000 square feet of office, laboratory and other work space.

In addition to that, the institution rents, in various locations in Washington, 358,000 square feet. These figures include existing square footage available at the location of the proposed Museum Support Center in Suitland, Maryland.

Mr. MINETA. At any given time, what portion of your total collections are on display and what portion are stored?

Mr. PERROT. Mr. Chairman, the figure is difficult to achieve precisely, in view of the fact that many objects in our collection are numbered in sections as groups. It is estimated between 2 and 5 percent of the collection is on view.

Might I remind you, Mr. Chairman, that, for example, we have 14 million stamps which are included in the gross figures of our collections, which amount to somewhere around 75 million objects.

Mr. MINETA. Using even the 5 percent figure, is that a good proportion? Is that a desirable ratio to have between support collections and exhibits?

Mr. PERROT. Mr. Chairman, it depends very much upon the kind of collection one is referring to. Certain types of collections, for example, will never be exhibited. These are collections assembled for research and my colleague, Dr. Kier, could speak passionately about his own specialty, echinoid and other aspects of marine life.

Of these items, only a few are on exhibit to the public. As regards other collections, paintings, for example, the National Portrait Gallery has virtually its entire collection, except prints, on view.

So the ratio of what is stored to what is exhibited depends upon the nature of the collections involved.

Mr. MINETA. What kind of "guesstimate" do you use as you try to determine for the future whether or not a researcher or curator is going to need something or want something and how do you do your own planning?

Mr. PERROT. Well, Mr. Chairman, this is a question that was asked very pointedly by OMB when we first approached them for their authorization to plan the Museum Support Center. Their question was, how do you know what you require, why do you require it, what kind of review processes are there, how do you avoid duplications? We prepared a report on the subject, I believe submitted to this committee, which shows that we do have a large number of review processes.

Now, the selection of collections is based upon, one, our perception of the need to present to the public this or that aspect of man or nature's creation; the other is to have within our collection those materials that are indispensable for further understanding of the evolution of this or that subject.

Our curators, after review by the chairman of their department, approval of the director and in some cases overview and approval of the Secretary and even the regents, are the ones who ultimately make the decision as to what should be acquired. Over the last few years the collections have been increasing at the level of about one million items a year.

Mr. MINETA. Are those donated or do you have to pay for the acquisition of those collections?

Mr. PERROT. A very large proportion of our collections, Mr. Chairman, are given to us. Many collections in the field of natural history are obtained either through the form of expeditions which collect them or through exchanges with other organizations in this country and abroad.

The institution does have a very modest budget for the acquisition of objects, but this is very, very small and is only used for items which are of signal importance and which could not be acquired otherwise. We depend very heavily on gifts and bequests as well as exchanges.

Mr. MINETA. How actively are the collections used?

Mr. PERROT. Mr. Chairman, some objects are used constantly; others are acquired because it is right to acquire them, because they will not be there for the future to be acquired. Therefore, our curators have to make a value judgment not only on the things they feel they need now for their own research, but also to prevent gaps emerging in the national collections which will prevent the full usefulness of their exploitation by future scholars.

May I say that there are gaps in the national collections in a wide variety of areas. In my own specialty, glass, there are gaps, in the decorative arts there are gaps, there are gaps in our coverage of the development of American painting. There are gaps in many, many areas.

Our curators are charged with filling the gaps not only for their own immediate scholarly research, but making sure that things that may no longer be available in the future because of changes, for example, in the ecological conditions in this or that part of the world, are obtained so that these benchmarks for future research are available here.

Mr. MINETA. Do you loan out whatever you bring into your collection?

Mr. PERROT. Mr. Chairman, we do loan, we do have review procedures; certain kinds of objects can only be loaned under unusual circumstances due to their rarity or fragility. Many objects are loaned, indeed Dr. Kier recently gave a rather horrendously large figure of objects out for research.

Mr. KIER. About 200,000 are out at any given time to museums around the world.

Mr. MINETA. Do researchers from around the country or the world also come in and look at the collection?

Mr. PERROT. Yes, we have researchers from every part of the world who study our collections extensively. They use our libraries, consult with experts, they come here under their own power or seek grants from other foundations; some are sent by other governments when they belong to national museums or national research organizations abroad.

We also have a very close interchange with various departments of our government, the Department of Agriculture, Fish and Wildlife Service, and others who use our collections, in some cases use them as bench marks for their own research and studies which eventually may lead to better strains of wheat or, for example, better control over this or that kind of pest.

Collections of the Museum of Natural History are extensively used for that purpose. Indeed, there is a small staff from these departments which is in constant residence in our facility because they need access to these collections to be able to do their job in the most efficient fashion.

Mr. MINETA. Mr. Secretary, in your testimony you have indicated that close to 40,000 square feet of your space is utilized in storing collections that would be moved to the new center. How would that 40,000 square feet then be used at the present location?

Mr. RIPLEY. Mr. Chairman, I would like to ask Dr. Kier to speak to that, if I may, as the Director of the Natural History Museum. He has a special sense of urgency about how to use that 40,000 square feet of space.

Mr. KIER. Well, we would like to use part of it for exciting temporary exhibits like the King Tut exhibit. It hurts me to see the King Tut exhibit next door, not in my museum. We would have space for that kind of an exhibit.

Also, we want to have an exhibit which talks about how natural history objects help man do things, like agriculture, insect control. We do not have any space in the museum for that kind of hall. We think that would be a very interesting hall to have.

Our main problem is, we do not have enough space now in the museum for our people who come to see the exhibits. We are so crowded now that we are going to have to close the doors in the museum part of each day in the summer within a year or two because there are just too many people. This added new space will mean we can postpone that day for a much longer time.

As part of that effort we are trying to get something exciting in every hall in the museum, not just the Hope diamond. Everybody flocks to see the Hope diamond. We want something exciting in every hall so they are spread out through the whole building not just in one place.

Mr. MINETA. Mr. Secretary, you have also mentioned in your testimony the conservator training program as one of the activities to be housed in this building. My understanding is that this training program would have to be authorized by the Congress. I am wondering if it were not authorized, would that in any way then reduce the amount of space needed at the facility? Would the conservation work to be done by these students be required whether or not there was a training program?

Mr. RIPLEY. Thank you, Mr. Chairman.

Mr. Perrot is an expert on conservation. I think he can answer that.

Mr. PERROT. Mr. Chairman, the question is a very valid one. Without engaging in any kind of special pleading, I would like to point out the evolution of this process of developing a plan for the Museum Support Center.

Since 1969 when the first study came out until 1976, we have constantly revised, reexamined our needs. At the last examination, which occurred in 1975, the last major examination which occurred in 1975, we came to the conclusion that we needed over 500,000 square feet. We are asking for 338,000. We are developing a building which is going to maximize every possible inch of square available in it. We are going to be decking certain areas, also compacting certain collections that lend themselves to that treatment, through the new kinds of compact shelving, such as used in libraries.

To answer your question, Mr. Chairman, there will be no difficulty at all using that space for those parts of the collection which could not be adequately housed in the 338,000 square feet.

However, the question is, the most important one is the need for conservation. It is one thing to have a static facility which has the proper climate and other controls to which the Secretary referred but, while decay may be arrested or slowed down, decay does continue to a certain extent and no remedial action takes place.

We have a responsibility, Mr. Chairman, to assist not only on the preservation of our collection by developing, helping to develop better-trained or more trained craftsmen and scientists in conservation, we have an obligation for ourselves, we also have an obligation to the rest of the country.

The nature of our collections is so vast, the complexities of the problems attending them are so great, that developing a training program in such a medium provides an opportunity for exposing students to a wide variety of research disciplines, to a wide variety of materials and to a wide variety of conservation problems. Therefore we feel it very appropriate to develop a conservation facility within this location.

Concerning the funding of the training program itself, Mr. Chairman, we would expect of course to obtain authorization for this through the regular budget process at such time as operations would be started, which we would expect to be by 1983 at the latest.

Mr. MINETA. Do you have any idea what those costs might be?

Mr. PERROT. Mr. Chairman, we have anticipated that the first years might be in the order of 325 to 350,000 and extending to the full projection that was outlined in S. 1029 to a little bit under a million dollars, in the tenth year.

Mr. MINETA. Mr. Secretary, when do you anticipate soliciting bids for construction?

Mr. RIPLEY. I am not sure that—possibly Mr. Kulig might know that better than I would. Mr. Kulig.

Mr. KULIG. Yes, sir. We anticipate going out for construction bids next October, of 1979, if we could have our designs prepared by next summer, which would allow us to be in a position to solicit construction bids.

Mr. MINETA. Presently you have the funds to do all the design work, if you come up with the plans and specifications you have all the money to go on that acquisition of property, or do you have any funds for that?

Mr. KULIG. The property has already been acquired. We presently have that. The funding that we now have identified for our use allows us to go up to what we call tentatives, through the conceptual stage, up to the tentative working drawings. We could not go out for working drawings with the funds that we have now.

Mr. MINETA. And that would be done by an outside architect?

Mr. KULIG. It would be done by an outside architect, yes, sir. GSA would go out in its normal fashion to solicit AE participation.

We would make a selection. Under GSA's procedures, they would proceed with our design requirements. Of course, the AE, with GSA's help, has to go through the various review committees within the Greater Washington area, which includes the National Capital Area Planning Commission, Fine Arts people, and, in this case, we probably would have input from the Prince George's County planning group.

Mr. MINETA. So that actually means you do not really need any new authority for construction until fiscal year 1980?

Mr. KULIG. No, sir. We need the authority to go out for construction this year, such that when we go out for bids for construction work, we have the obligational authority to award. I cannot go out to award, as you probably well know, I cannot go out to award if I do not have a commitment.

Mr. MINETA. We can do that in the fiscal year 1980 cycle and not necessarily in fiscal year 1979?

Mr. KULIG. Well, it would certainly help to accelerate our program and it would help the Smithsonian to achieve their objectives, if we can gain a year then we gain on the construction cycle.

Mr. MINETA. If you are not going to go out until fiscal 1980, which would be between the period 1 October 1979 and 30 September of 1980, I assume that you do not need the authority now as long as you have it for the fiscal year 1980 budget cycle?

Mr. KULIG. Yes, sir, that is correct.

Mr. MINETA. Is the Smithsonian required to submit its budget request to OMB before submitting them to the Congress, and has OMB reviewed and altered this proposal in the years that they had it before them?

Mr. PERROT. Mr. Chairman, I believe OMB has approved the basic concepts and approved the allocation of \$900,000, of which \$525,000 will be paid as part of the fiscal 1979 budget. So the basic planning that we have done has been approved by OMB. We have every indication that they will approve as well our request for construction funds.

Mr. MINETA. Have they ever come back to you and altered whatever proposals you have submitted to OMB for their consideration?

Mr. PERROT. Not to my knowledge, Mr. Chairman, insofar as this project is concerned.

Mr. MINETA. Thank you very much. Mr. Walsh?

Mr. WALSH. Thank you, Mr. Chairman.

In the discussion here today, we have talked about the need for storing and conserving the artifacts that you have collected. Will this construction permit increased public access to the exhibits and in what way will it do that?

Mr. RIPLEY. Very much so, Mr. Walsh. It will give us a very measurable amount, 40,000 square feet extra in the Museum of Natural History alone for public exhibition.

I might point out parenthetically that of the six major natural history museums in the United States, in Chicago, Denver, New York, San Francisco, Los Angeles and finally Washington, we have virtually the smallest present public exhibition area of all of those museums.

On the other hand, we have more than twice the public visitation. So that we are starting off from really behind the eight ball as it were in terms of our exhibit space and the expectations of the people who come here.

Mr. WALSH. One of the things that I am concerned about, because I do not understand it, is the training program that you talked about for conservators, and I assume curators.

How do these people come to you? Do they come with a college degree, already trained and qualified educationally, or what are we talking about when we are talking about training these conservators?

Mr. RIPLEY. Well, sir, every major museum and many of the smaller museums find today an enormous priority need for someone who has the basic skills in conservation. These vary from paper, for example, in which there is a special department at the Library of Congress, with which we are not primarily concerned, to heavy objects, metals of various kinds, wood, of course, stone, textiles, fabrics. You find all over the country an increasing recognition of the fact that this is a subject which is very—which has been very much neglected in the past. This is a recent awareness.

Many of the museums designed in recent years are, unfortunately, most efficient in space or recognition of the need for conservation. This goes back as recently as the past 15 years. So there is an enormous need and enormous demand. There is absolutely no question about that.

There are two or three centers in the country today, rather small—one I am a trustee of, at Winter Tower in Delaware; another one at Cooperstown in New York, another one in the Middle West in Illinois.

These centers tend to acquire their students, their conservators by a system that we might call apprenticeship. That is, a person with a particular bent who wishes to learn these things will come and simply apply. They do not need to have a college degree, necessarily, although in some cases they might be quite highly qualified with degrees. But they may not need it.

It is a skill thing, special skills, largely the manual and dexterity skills of the finished craftsman or artist are inherent in these people. We get them already, they float in through the door, they just arrive on our doorsteps, sometimes, without even any premonition on our part. We do not have the space for many of them.

We recognize as a national institution that this is a kind of new national urgency in the museum field and therefore we would be derelict in not presenting it as such an urgency to our committees that are concerned with nurturing the Smithsonian as the father and mother of museums in this country.

We are responsible for the national collections; therefore, we have an implicit kind of leadership role to explain to the field of museums how the United States values museums, how we must worry about conservation and how these people, if they are available, can possibly be trained. It is a growth process in the best sense, that with the awareness of the fragility of our collections, a natural gap is sort of beginning to be closed in the training and preparation of conservators.

Mr. WALSH. Then there is no plan for training conservators other than the three places you mentioned and the Smithsonian?

Mr. RIPLEY. As conservators come along and as we have any space for them, we will try and talk with them, urge them maybe to go elsewhere to a better place. It is an open kind of discussion. As we can do anything ourselves, we will.

We have very limited space and limited funds. But particularly on the Senate side there has been great discussion of this and urging that we accept this kind of mandate to do more about it and try.

Mr. WALSH. How many are you training now in the course of the year?

Mr. RIPLEY. I would have to ask Mr. Perrot or Mr. Organ, who is here in the audience. Mr. Perrot?

Mr. PERROT. Mr. Chairman, approximately we have between six and eight interns a year. This is not a thorough conservation training; it is, rather, training in a specialty in conservation.

What we are intending to do out at Silver Hill, once the support facility becomes fully operational, is to present as rounded a program as possible on the various disciplines of conservation, and do so at two levels—the technician level, and the more sophisticated, full scientific conservative level.

Mr. WALSH. How many do you plan to train in the course of a year?

Mr. PERROT. At present, 30 are trained a year in the United States.

It has been suggested, and very eloquently, by Senator Pell, that it would be ideal or it would be good if one could find a way of training 150 a year. There is no possible way that this can be done, desirable as it would be, in the foreseeable future.

We have projected that by the fifth year of operation we might be training up to 27 technicians and possibly up to 30 to 35 conservators.

May I take this opportunity, Mr. Chairman and Mr. Walsh, to correct a figure that I gave before?

I referred to the tenth year for between \$900,000 and \$1 million. It is the fifth year that I meant to specify that figure.

Mr. WALSH. The funds requested in the bill will be transferred to GSA, as I understand it. They will be responsible for construction of the facility. This is the way it is going to work?

Mr. RIPLEY. Yes, sir.

Mr. WALSH. Who is going to be responsible for managing the project?

Mr. PERROT. Mr. Chairman, we would expect the entire overseeing of the project would be in the hands of GSA, with appropriate staff delegated by the Institution to work very closely with them.

We have developed an agreement, that we are on the verge of signing with GSA, to handle the entire operation for us and have specified in this very clearly the responsibilities.

The programming responsibility would be within the Institution; the responsibility to make sure that the program is carried out as economically and as rapidly as possible with GSA.

Perhaps Mr. Kulig would like to comment on this more precisely.

Mr. KULIG. Yes, sir.

We are in the final processes of preparing a memorandum of understanding agreement between the GSA and the Smithsonian Institution, and it is probably in final typing right now. We had to make a few changes to it on Friday, but we are that far.

GSA would be fully responsible for the project, such as we have done for other projects with the Smithsonian and other projects.

Mr. WALSH. When you say "responsible," do you have an architect and engineering firm selected at the present time?

Mr. KULIG. No, sir; we do not.

Mr. WALSH. Whose responsibility is that going to be?

Mr. KULIG. GSA would solicit for bids and select the architect.

Mr. WALSH. Well, they don't really solicit bids for an architect or engineering firm?

Mr. KULIG. That is correct, sir.

Mr. WALSH. Do you have an architect and engineering firm that you will be recommending to GSA? Is there any expertise or any special expertise that is necessary in building this type of facility?

Mr. PERROT. Sir, we have made a very detailed study of our requirements. This study is constantly being refined by the staff, who will be specifying very precisely what our needs are. The final document is almost complete. We expect it to be ready for distribution within the next few weeks. We would expect then to make a request for proposal.

GSA and the Smithsonian will have review of proposals submitted by architectural firms; then there will be a selection made by the Secretary of the Smithsonian Institution, with the Administrator of GSA concurring on the matter.

Mr. WALSH. You do have a designed facility, as I understand?

Mr. RIPLEY. Right, but we don't have an architect or engineering firm selected at this time.

Mr. WALSH. Who will design the facility that you have in mind? Is that an in-house proposition?

Mr. PERROT. Sir, if I might clarify, we have a conceptual design. We have no architectural designs whatsoever at this moment. We have ideas as to what the relationships should be. We have ideas concerning the square footage required; we have ideas concerning the volume of the square footage; but we do not have anything on paper that could be considered a plan. This we would expect to be produced by the A&E selected.

Mr. WALSH. Then how firm would your estimate of the cost per square foot be? I think you mentioned \$63.60 a square foot. That is a ballpark figure?

Mr. PERROT. This has been developed, Mr. Chairman, in close cooperation with GSA, based upon their knowledge of construction costs and the kind of specification that we have described to them.

Mr. KULIG, would you like to comment further on this?

Mr. KULIG. The Smithsonian gave us their scope of requirements as they envisioned them and our appropriate estimating people reviewed those requirements and came up with the estimate that I am sure you probably have seen. That is the best estimate for our cost of the project to date, and that is the estimate that we will use as we go through this project for appropriate cost factors as they apply to the A&E, and construction, reservation, contingencies and things like that.

Mr. WALSH. And the building will be bid competitively?

Mr. KULIG. Yes, sir.

Mr. WALSH. You state that 37,000 net usable square feet will be used for laboratories. Will this replace existing laboratories or will it be in addition to existing laboratories?

Mr. PERROT. Mr. Walsh, there will be a number of laboratories devoted to conservation, devoted to the various needs of the Museum of Natural History. It is not expected that any major laboratory from the Museum of Natural History will be relocated to this facility; rather, there will be new laboratories created and the previously occupied laboratories will be used to give more space to the scholars at the Museum of Natural History as well as to house those collections which are under study under better conditions.

Mr. WALSH. It occurs to me—and this is a very, very rough guess—because they don't have the figures on the square footage—but your offices are going to run about 17 or 18 percent of the total percentage. Is that offices and workrooms, or is that workrooms alone, or is it offices alone?

Mr. PERROT. Mr. Walsh, we have broken down the net square footage in space according to the following: For office/workroom—we are not expecting to have any luxurious offices there but rather functional offices with adjacent workspaces—43,283 square feet will be allocated to the Museum of Natural History; laboratory spaces, 17,800 square feet will be allocated to the Museum of Natural History; high storage—we expect this storage unit to be a fairly large structure which will be decked on the interior so as to allow very large objects to occupy the space of two floors, while smaller objects can be placed upon the decking, which will be compacted—for the high storage area we expect 39,870 square feet; and for the compacted storage area, 107,523, for a total of 207,756 net usable square feet for the Museum of Natural History.

We have allocated approximately 49,410 square feet to various functions related to conservation. Some of these are laboratories; some of these are spaces that can be used for classrooms and demonstrations; and some of these are office spaces.

Mr. WALSH. I don't have a copy of that paper. I wonder if we could have that inserted in the record?

Mr. PERROT. I shall be glad to.

Mr. WALSH. And I would like to have a copy of it, if I may.

Mr. MINETA. Copies will be made available to us and, without objection, will be made a part of the record.

[The information follows:]

SMITHSONIAN INSTITUTION
MUSEUM SUPPORT CENTER
SPACE ALLOCATIONS

USER	NET USABLE SQUARE FEET			
	OFFICE/ WORKROOM	LABORATORY	HIGH STORAGE	COMPACTOR STORAGE
Anthropology	12,500	6,900	-	45,315
Botany	1,400	-	-	6,583
Entomology	14,808	-	-	12,174
Invertebrate Zoology	2,175	-	-	7,242
Tumor Registry	700	1,210	-	-
Mineral Sciences	400	-	200	-
Paleobiology	500	-	8,000	-
Vertebrate Zoology	1,250	2,000	17,500	-
SOSC	7,550	100	-	26,334
NMNH Shared Space	-	6,870	14,170	9,875
ADP/Registrar	2,000	-	-	-
NMNH Subtotal	43,283	17,080	39,870	107,523
				207,756
OBM	3,500	-	-	-
CAL	7,730	16,680	2,300	-
MHT	-	2,000	10,130	-
OPLANTS	500	500	-	-
Protection	2,500	-	-	-
Food Service	-	1,000	-	-
Other User Subtotal	14,230	20,180	12,430	-
				46,840
GRAND TOTAL	57,513	37,260	52,300	107,523
				254,596

FACILITY COST

A/E Design, Design Review & Administration	1,303,000
Estimated Cost of Construction	17,052,000
Construction Contingency	853,000
Reservations	1,564,000
G.S.A. Management & Inspection	<u>728,000</u>
Estimated Total Cost	\$21,500,000

FACILITY SPACE (Net Usable Square Feet)

Office/Workroom	57,513
Laboratory	37,260
Collection Storage	159,823
Total Assignable	254,596
Total Gross Square Feet	338,000

Mr. WALSH. You also will be installing a computer. Where is that going to be located? Will that be in this new facility?

Mr. PERROT. We would expect, Mr. Walsh, that the computer facilities that the Institution has on The Mall would continue to be used, but we would have terminals and many computers that are being developed, we expect that these computers will take very little space.

Mr. WALSH. A new computer facility?

Mr. PERROT. Not as such, but there will be spaces and wiring for terminals in various parts of the buildings.

Mr. WALSH. You have your construction and improvement contracts of \$17 million, you have a contingency of \$853,000, and then you have reservations for \$1,564,000. Would you explain those for the record, please?

Mr. KULIG. Yes, sir. Reservations include, among other things, landscaping, signage, perhaps—

Mr. WALSH. What was the second?

Mr. KULIG. Signage; carpeting and perhaps draperies, if those kinds of things are required, and it also includes an allowance for fine arts, which is right now 1-1/2 of one percent of our construction budget.

Mr. WALSH. One and a half percent of the total?

Mr. KULIG. Yes, sir, which would be \$89,500, to be exact.

Mr. WALSH. If you were asked to justify this on a cost savings basis—and I know it is extremely difficult in any work of this nature—could you point to any potential savings in the construction of this new facility?

Mr. KULIG. What do you have in mind?

Mr. WALSH. Usually when we have a building proposed, they do tell us that it is going to be more efficient, that by providing the proper facilities the staff will be able to do a better job, productivity will increase, things of that nature.

Mr. KULIG. I can talk to the construction aspects of this, which will contribute to the Institution. As you know, GSA is always revising its requirements, which include such things as use of solar energy. We have a management tool called "value engineering, value management," which is applied during the design process, the value management process, which is done during the design of the facility. This is one tool which we use to look at, to save money, also to increase the efficiency of the building or improve upon the operating function of the facility. I don't think I am qualified to talk about the employee relationship.

Mr. WALSH. Do you want to continue, Mr. Perrot?

Mr. PERROT. Mr. Walsh, unquestionably the efficiency and the output of our scholarly staff will be greatly improved and increased by working in conditions where they can have ready access to the collections; but perhaps more important is the fact that these collections are not expendable; they are not renewable in many cases; they are in some cases priceless because they are the remains of vanished species and therefore their value in terms of dollars cannot be estimated. A whale that is extinct and whose bones we keep—we have kept until now under conditions that are not conducive for proper, safekeeping—if allowed to deteriorate completely, it is a loss to future scholarship, is a loss to future generations.

I do not know how we can quantify this. The same kind of argumentation applies to practically every aspect of our research collection, and I think Mr. Kier would like to comment.

Mr. KIER. If I may, if I had to open an exhibit hall and I had to have something like this basket, it would cost about \$5,000 of labor to get this basket, so we could put it on exhibit, and it is the only one we have, so we would have to do it, where this basket, which has been well taken care of, can go right on exhibit without any cost, and to make it so it can be used, would cost a lot of hard money.

Mr. WALSH. So the way we justify this project then is for the preservation of these priceless materials that we have for the enjoyment of future generations?

Mr. PERROT. I would find that sufficient justification, Mr. Walsh.

Mr. WALSH. Looking into the future, how long is this facility going to serve your needs?

Mr. PERROT. Well, we estimate that through the latter part of the 1980s and early 1990s we will be operating in a far more efficient way and preserving collections in the way that they should. Beyond that, into the next century, we again would be very hard put. There is no question that in time additional spaces will have to be found for some of our other museums as well as to accommodate the growth of collections which we cannot slow down without impairing the future value of what we already have.

I would not expect, Mr. Walsh, that the Secretary would be back to see you on this matter or a Secretary before the late 1980s or 1990s, and with construction sometime beyond that; but when, I am unable to predict.

In any case, priceless collections will have been preserved and will be kept. We intend to monitor very carefully the conditions in this new facility. We intend it will be built in such a way that, for example, the rodent problem which has affected the basket which Dr. Kier has shown will not be there. No matter how difficult things become in the 1990s and beyond, we will be immeasurably better off than we are now.

I would prefer not to tie the hands of our successors, but I do believe this at this time.

Mr. WALSH. When you do solve the rodent problem, I wish you would share your research with the people who run the Cannon Building. It would be very helpful. I have no further questions, Mr. Chairman.

Thank you very much, gentlemen.

Mr. RIPLEY. Thank you, Mr. Walsh.

Mr. MINETA. I apologize for not having called on the distinguished chairman of our full committee prior to this, and, Mr. Johnson, the full committee chairman, is here.

Mr. Johnson, do you have any questions?

The CHAIRMAN. Not at this time.

Mr. MINETA. Mr. Roberts?

Mr. ROBERTS. Thank you, Mr. Chairman.

I find myself in a rather difficult position, because I intend to oppose the granting of this authorization unless it is deferred until after January. I would confess that most of my opposition stems

from a personal situation at the Smithsonian, which I will go into, if it is necessary, but there are a lot of other things that need to be gone into before we authorize this project.

To start with, we did not authorize the plan. We did not authorize Phase I. This organization, as great as it is, is neither fish nor fowl, is not a Federal agency; it is not under Federal regulations for the most part; and I would ask the Secretary, how many separate committees you deal with. I know you have to deal with the Committee on Appropriations; you deal with the Committee on Government Operations; you deal with the Committee on House Administration and the Interior Committee.

We have seen no plans, no specifications. That is something that normally we would grant the authorization for the whole thing.

Mr. Secretary, how many of those do you actually have to deal with?

Mr. RIPLEY. Mr. Chairman, in the House we go annually to an Interior subcommittee for our annual appropriations. As far as authorizing legislation is concerned, our normal procedure has been to go to the House Administration Committee, the full committee, the subcommittee known as the Committee on Libraries and Memorials. However, in each case, as I understand it, it is the responsibility of the Parliamentarian of the House to assign a bill which is not in the normal course of events an annual appropriations bill to the appropriate committee, so that, for example, thinking of a bill which was introduced in 1966, the Parliamentarian of the House, at that time Mr. Deschler, assigned the bill to the Public Works Committee. Thinking of this particular bill, it was assigned by the Parliamentarian to the Committee on House Administration whose Subcommittee on Libraries and Memorials is the one that normally takes care of our authorizing.

So, having appeared before that committee, Mr. Nedzi's subcommittee, apparently because this involves construction, we came to this committee, a subcommittee of the full committee of Mr. Johnson's.

In other cases, for example, work in marine areas, which we also do, we may go before the Subcommittee on Merchant Marine and Fisheries and from time to time we have gone before Government Operations; but, of course, we bow to the authority of the House authorities who assign particular pieces of proposed legislation to particular committees.

Mr. ROBERTS. Do I understand that a bill was introduced for construction or planning and it went to the Committee on House Administration?

Mr. RIPLEY. As I understand this particular bill, which has to do with authorizing us to proceed with the refined planning for this museum services facility, the Parliamentarian of the House referred it to the Committee on House Administration. That is, of course, not within our power to affect in any way.

Mr. MINETA. In order to clarify that, Mr. Roberts, there is a distinction made for the Smithsonian between two major parts, one as it relates to programs and the other as it relates to construction. As it relates to programs, it would come under the jurisdiction of the House Administration Committee, and the planning, conceptual

nature of their programs, is where they got the money from House Administration since that was considered part of programs. But for the authorization for actual construction, that comes to this committee.

As I understand it, that is how this happened with P.L. 94-98, that that was authorized by the House Administration Committee as part of the programs of the Smithsonian Institution.

Mr. RIPLEY. Thank you, Mr. Chairman.

Mr. ROBERTS. GSA, of course, will let the A&E contract and supervise the design. Then will it belong to the Federal Government? Does it belong to the Smithsonian?

Mr. RIPLEY. Under the statutes authorizing the Institution, Mr. Chairman, we are authorized to administer and to accept appropriations from the Congress for so administering the safeguarding and keeping our buildings.

Mr. ROBERTS. Ultimately this would be really a third of what you are going to need, isn't it, by 1990 to 2000, isn't this really an increment of one-third of what you need? Originally, weren't we talking, back in 1970 or 1971, about three times as large a building?

Mr. RIPLEY. My impression, Mr. Chairman, was that we were originally talking of about twice as much as this, but we have cut this in half, for a very sensible reason, that over a period of time it is possible to refine, to conceptualize, to replan and reprogram things more effectively in a fairly large organization, even though the Smithsonian is small by Government standards, with time and with thinking, and we feel now that the time is here, that we have come to the point where we are presenting something to you and your committee which is fully refined.

Mr. ROBERTS. Mr. Chairman, it would be my understanding of the Budget Act that there would be no way they would be eligible for appropriation until fiscal 1980, even if we authorized this today. Is that your understanding?

Mr. MINETA. That is right. Under the present bill that is under consideration, unless it were amended, it would not be in conformance with the Budget Act and it would have to be amended.

Mr. ROBERTS. It would be subject to a point of order.

Mr. MINETA. That is correct.

Mr. ROBERTS. Have the appropriations been requested of either of the Appropriations subcommittees for construction of this building?

Mr. RIPLEY. Not in the 1979 budget, but we have fully informed OMB and the Congress, the committees involved, that given concurrence and authorization, we plan to go in the 1980 budget for this amount.

Now so far, because our total budget is so relatively small, we have been fortunate enough to be able to obtain contract authority from the Appropriations Committees so that we have not had to ask for what is for us a very major amount of money all in one particular fiscal cycle, but the fiscal budget of 1980 as proposed under the new regulations, both of the Congress and of the Executive, encompasses the request for \$21.5 million, or whatever the exact figure is.

Mr. ROBERTS. Mr. Secretary, did you have contract authority from the Appropriations Committee to go ahead and let a contract on this building?

Mr. RIPLEY. No. We do not. I simply was referring to our past history. This is a difficulty for us, to ask and receive in one particular budget such a major amount of money.

Mr. ROBERTS. Mr. Chairman, I certainly don't want to belabor this, and I will not ask any more questions. I hope we will defer action until the new Congress convenes and I certainly will support it at that time.

At this time I will oppose it and reserve all points of order.

Mr. MINETA. Thank you, Mr. Roberts.

Mr. Stangeland?

Mr. STANGELAND. Thank you, Mr. Chairman.

I want to go back a little bit and based on a knowledge of what Mr. Roberts has said, did I understand you to say that there is no legal architect to draw this drawing, to develop the estimates of what this building was going to cost? Where do the figures come from?

Mr. RIPLEY. Why do you ask that, Mr. Stangeland, if I may ask, for clarification for my own reasons? You ask if we have had an architect. We, in a sense, are uniquely perhaps characterized as people who are housekeepers par excellence; therefore, what we are really talking about is the required space inside of something which will keep out the weather, by an architect. From my own point of view, I assume you are thinking of a design kind of a person. By a contractor perhaps or an engineering firm you may mean someone who is concerned with putting in the necessary utilities, but at least from the beginning—and this has been going on now for ten years—our planning includes many of those aspects of what we think we need.

In other words, we are not a householder who goes to someone and says, "Please design a house for me. I need three rooms, a kitchen, bedroom and so on." We are, rather, very specialized people who say we must have 40,00—this by arguing it out over years—we must have 40,000 square feet in which we can have so many kinds of work areas to shift around objects on trays. We have studied this in Europe. We have studied this around the country. Specialized kinds of storage is known to library people and it is also now known to museum people. In Geneva, for example, there is a museum which we can study, get the blueprints out, and learn all about how to shift large numbers of specimens on overhead trolley cases and get them into the narrowest possible kind of space.

So those kinds of things are really now refined, and when we speak of going to an architect or an engineer, we say, "Wrap it up in a cocoon for us, make the utilities work, make sure that we have electrostatic devices to screen out, let's say, 80 percent of the dust and pollution," which is our great enemy, and we can make it exactly how many square feet we need to fit so many cases into so many spaces and have so many curators, or students or technicians be able to get at them.

Mr. STANGELAND. I understand that you have the expertise in-house to design or decide what is necessary for your particular

projects and what you need, but what I am questioning is, who sets the price that this is going to cost to get the job done? I guess that is why I am asking about architects and you are talking of contract with GSA.

Mr. RIPLEY. The architect, I suppose, could set any price he would like, but by the time we get through talking with GSA about this space, this kind of cubic or square footage, with the sophisticated accoutrements, electrostatic things that compress so much per square foot, so much air control, humidity, quality control, temperature control and so on, GSA has a whole series of sliderules that they can come up with and also we have a whole series of minor engineering subdivisions, many of which are within our own staff in the Smithsonian, to be able to produce this kind of thing, which, in effect, is not the conditional specs to build the building tomorrow but, rather, the very sophisticated interior space to say what you have to build it for.

Mr. STANGELAND. Where does the figure \$21.5 million come from? Is that just seed money to start up?

Mr. RIPLEY. No, sir; that is a refined figure for what any architect worth his salt had better do for us, because we know what it is going to cost. We have been to outside experts; we have been to outside authorities all over the country, to make sure that we don't get an architect who is trying to blue-sky it on us.

Mr. STANGELAND. Very good. The reason I ask is that we have had hearings here on the James Madison Memorial Library and we have had hearings on other Federal buildings, and they start at one figure, but they generally balloon to about twice that before we are through, and I am wondering if these are hard figures or just what kind of figures they are.

Mr. RIPLEY. I am very proud, Mr. Stangeland, that I went back to the architect for the Air and Space Museum and I said, "You come in with a figure that we have been authorized to get or we won't be talking to you," and he came in on the budget. Nothing like that has happened since the Supreme Court was built in 1911.

Mr. STANGELAND. Thank you.

No further questions, Mr. Chairman.

Mr. MINETA. Mr. Ginn?

Mr. GINN. Thank you, Mr. Chairman.

Mr. Secretary, I have long held the Smithsonian Institution in the very highest regard and I think you and your associates, through the years, have done a magnificent job in preserving historic things that mean so much to the history of our country; but I am also concerned about our growing tendency to feel that we have to locate everything in Washington, D.C.

In that regard, I have this question: Do you have a loan program? I am wondering that if you need space, why can't more of these things be loaned to museums in other parts of the country, so more Americans could see them?

Mr. RIPLEY. It is a pleasure, Mr. Ginn, to answer that question. Thank you very much for asking us.

We do have a whole variety of methods by which we do lend, and by which we do extend our services and our exhibitions across the country.

Last year, as I recall, we had at any one time well over 100, close to 100—in the Bicentennial Year I know we had 200—traveling exhibitions, largely furnished with materials from our own collections, but in any case serviced by us, which went to every State of the Union and were visited by some five million people. That is about five times the visitation of one of the larger art museums in Chicago. We think that this service with its extension, as it were, of our collections and our facilities and our expertise, because the labeling and all the materials in the package are certified, as it were, by us, is enormously valuable for Americans.

We have that. We have also an exchange program which Dr. Kier knows about in the field of natural history, but also goes into history, art and history of technology, of materials going out to scholars across the country, and this has been extensive over the years.

In one of my predecessor's time, at the beginning of the century, some 70 percent of the materials that the Smithsonian has received had been in effect exchanged back; and much the same situation went on with the books and papers that were coming into our collections.

So I am proud to say that I think that our services outside of Washington are highly effective and they have been greatly extended by the development of the Associates, the National Associates of the Institution, who, as you may be aware, now receive all kinds of services as part of their membership in our Association.

MR. GINN. I am delighted to hear your explanation of that, Mr. Secretary.

Is there any way that this program could be extended even more, so you might not need as much additional space as you have presented to us?

MR. RIPLEY. I think that we will do our best and we are trying to do our best. It is a question of special needs at any one time. Who, for example, is to be the central repository for particular kinds of collections in insects, for example, entomology? We work closely here with the Department of Agriculture and, in fact, much of the research on the collections is done by Department of Agriculture scientists who use our facilities.

In connection with mammals and birds, fish, plants, a great deal of the work is done by specialists from the Department of the Interior, and we therefore get a dividend, as it were, without having to take on some additional personnel for our own roster of curators by having ourselves near these main centers of research which are going on on the health of the American environment.

MR. GINN. Thank you very much, Mr. Secretary.

MR. CHAIRMAN, thank you.

MR. MINETA. Mr. Livingston?

MR. LIVINGSTON. Thank you, Mr. Chairman.

MR. SECRETARY, bearing on the question propounded to you by my colleague from Georgia, I take it that you have more or less determined that this facility would be ample for your immediate needs, but in noting that you pointed out your Institution accumulates some million objects a year, will it be satisfactory to meet the needs for storing objects in the future, and will there be any

problems in modifying the building in the future to meet your future needs?

Mr. RIPLEY. I think we have to depend on technology to answer the last part of your question. It is possible, just as, for example, a major museum like the National History Museum a few years ago went in for having itself renovated and air-conditioned, it is possible that in the next 20 years some superior devices for eliminating pollution will be invented and we may have to come back to these committees or the Appropriations Committees and ask for funds to renovate.

We have a renovating problem that goes on every year with our buildings. As far as space is concerned, that is a puzzlement and I would be less than honest if I were not to say to you that it really requires a crystal ball to be able to determine 26 years from now whether we would still be accepting a million objects, whether we would be accepting 200,000 objects—and these might be small insects—or whether we would be accepting two million objects.

In a sense, that is the problem of being saddled, as the Smithsonian was in 1848, with the responsibility for the national collections. We have to live by judgments and as the generations come and go, the judgments may vary and the priorities may become more excessive.

Mr. Livingston, in a facetious way, I have sometimes referred to museums as the last remaining legitimate growth industry. There is a problem there and we don't know how to face it, and I really would be unable in all honesty to answer your questions sensibly, beyond saying that we believe that this building will solve our needs to the turn of the century.

Mr. LIVINGSTON. Thank you, Mr. Chairman. I have no more questions, only with the comment to the Secretary that I am personally bringing my own family up here in about a month and I anticipate taking them through many, many splendid hours, going through the Smithsonian Institution. I look forward to it. Thank you.

Mr. MINETA. Mr. Livingston, our term of office is only two years and I am not sure even with every weekend off you can take the family through all their facilities.

Mr. Chairman?

The CHAIRMAN. Thank you, Mr. Chairman. I would like to ask just one or two questions here.

Mr. Kulig, as I understand it you are from GSA?

Mr. KULIG. Yes, sir. I represent GSA.

The CHAIRMAN. What has been done as of now with the project in the way of engineering?

Mr. KULIG. GSA has had no participation on engineering whatsoever, sir. We have provided financial data, making estimates, assisting the Smithsonian in refining their scope, to prepare us for future work with architects, but to date there has been no engineering work done at all.

The CHAIRMAN. Mr. Ripley, maybe you would want to reply to that, too. What has taken place as far as hard A&E, if anything?

Mr. RIPLEY. Thank you, Mr. Chairman. I would like to ask Mr. Perrot to answer that, because he has been on top of this project since the beginning.

Mr. PERROT. Mr. Chairman, we have developed, as you know, over the last few years, a rather extensive study which included not only a study of the relationship of the parts, a refinement of our own requirements, but also included some architectural concepts as well as concepts of space management, this study, as we call the Coopers and Lybrand Study, which has been distributed to this committee and which incorporates all of the best thinking of the Institution at the time it was done.

Since then, as I tried to explain earlier this afternoon, we have refined the space requirements and cut down substantially the amount of spaces that were required that have been specified in this study. We have not engaged in any architectural work or engineering work as such, since we had no resources to do so, nor did we think it appropriate to go too far without having some clear indication from this committee that authorization would be approved.

Therefore, we are now able to present to you, I hope in fairly clear terms, our general concept. We are able to represent to you the land on which we intend to construct. We are able to assure you that this structure that will go up will be set on the land in such a way that it will allow for additions as future generations may find it necessary. It will try to maximize the amount of resources that we have, both dollar and space, so that things will be as compact and as economical as we can do, and also so as to assure that there will be the very best possible relationship within the general configuration, so that future expansion can take place without rediscovering the wheel.

But we do not have a hard architectural plan to present. There are some concepts, if I may, that I could show you which are on the easel.

The CHAIRMAN. That is fine, but I am trying to find out here if we could go with an A&E authorization here to get the architect/engineering work on its way.

GSA, maybe you would be the agency that would go to screen and hire and acquire the firm that would do the A&E, and I presume the A&E would be about \$2 million, \$2.5 million?

Mr. PERROT. Mr. Chairman, if I may answer this, we already have authorization, planning authorization. What we lack is construction authorization.

The CHAIRMAN. I don't think you have the money for the hard A&E; you are talking about at least \$2 million, \$2.5 million?

Mr. PERROT. We have \$900,000, Mr. Chairman, and as Mr. Kulig mentioned earlier, it was our feeling that we could develop plans in sufficient detail to start construction with this at such time as construction authorization allowed it. I am not an engineer and I am not very familiar with the subject. I pass on the microphone to Mr. Kulig.

The CHAIRMAN. Well, for nearly every building that I have known around here, the A&E is pretty much standard if you are going to an outside firm, and you can't do it for \$900,000 on a building like this. You are going to have to get into at least somewhere between eight and ten percent, and then probably there would be contingencies above that for all I know as far as contracting would be let and

supervision as the building proceeds; but let me hear from GSA. How do we get this started on an A&E contract?

Mr. KULIG. I would like to make two points, Mr. Chairman:

Number one, we have a six percent limitation on what the A/E fee can be, maximum, as it relates to construction cost. In all due respect, I don't think that the A/E fee would be in the \$2 million ballpark; it would be considerably less. It would be over \$1 million; it is not going to be that high.

Secondly, the \$900,000 that is available now would allow us to go out and negotiate with an architect and have him engage in work up to the tentative stages of development. He would go through his concepts; he would go through the tentative drawings. We would be prepared to do everything short of the actual working drawings of the facility, and that would take us through a period of next summer, up to the point where we could be in a position to begin going out for bid for a construction contractor.

The CHAIRMAN. Whose money is the \$950,000?

Mr. RIPLEY. This has been appropriated to the Smithsonian in two stages, sir, as part of our planning money, and our in-house planning, as we have described, has been going on for these years. We have Mr. Reiss with us.

The CHAIRMAN. That is fine. I realize you have done a lot of planning and a lot of in-house planning and everything that goes with it, but you have not let the contract to an architectural/engineering firm. All that money you have spent in this other would probably be helpful to the architect, whoever he may be.

Mr. RIPLEY. We haven't spent all the money; we have the second appropriation now for \$575,000—

The CHAIRMAN. I understand.

Mr. RIPLEY [continuing]. Which is in the 1979 budget.

The CHAIRMAN. Do you have \$950,000 on top of that?

Mr. RIPLEY. We had \$375,000 before—is it, Mr. Reiss? Mr. Reiss is in charge of our Operations Department. He is one of our backup witnesses here.

Mr. REISS. Of the \$325,000 that has been appropriated in 1978, we have a current balance of \$295,000 available. Added to this would be the \$575,000 which was appropriated in 1979, giving us a \$900,000 available fully for the planning but a portion that GSA would utilize for its necessary work to get us through the tentatives that Mr. Kulig was talking about.

The CHAIRMAN. We are trying to help you out of this, to get you underway.

Mr. GOLDWATER. Will the gentleman yield?

Are those discretionary funds; can you spend those however you wish?

Mr. RIPLEY. No, sir. These are appropriated for these purposes.

Mr. GOLDWATER. For the purpose of this facility?

Mr. RIPLEY. Yes.

Mr. GOLDWATER. And for nothing else; you can't use them for anything else?

Mr. RIPLEY. No.

Mr. GOLDWATER. So you have almost \$900,000 which is not enough to do the architect-engineering work leading to construction.

Mr. RIPLEY. We think it is approximately enough, Mr. Goldwater.

Mr. GOLDWATER. But that is not 6 percent.

Mr. KULIG. No, sir.

Mr. GOLDWATER. You have to spend 6 percent?

Mr. KULIG. No, we don't have to. That is our limitation. I will try not to spend 6 percent.

Mr. GOLDWATER. I was testing to see if you have the spirit or not.

Mr. KULIG. I have the spirit.

Mr. GOLDWATER. You don't have any problem about the necessary architectural drawings, engineering, and sharing it with us prior to authorizing and appropriating money?

Mr. RIPLEY. No, sir, we do not.

Mr. GOLDWATER. How soon could that occur?

Mr. RIPLEY. Well, we would require this as part of our full budgetary figure in the next budget, that is, the 1980 budget. Our problem is that if we don't get going through the 1979 budget, we are in great danger of not being able to get the appropriate follow-up for the 1980 budget.

Mr. GOLDWATER. So you have the authority to go ahead and do the architectural work and you will have those done prior to our authorization hearings I suspect next year?

Mr. RIPLEY. I don't know what the procedure is.

Mr. KULIG. Next year in the summer, yes.

Mr. GOLDWATER. So that we could authorize them for the 1980 budget.

Mr. KULIG. That is correct.

Mr. GOLDWATER. I don't see any problem with that.

Mr. MINETA. The time belongs to the chairman of the full committee.

Do you have any further inquiries, Mr. Chairman?

The CHAIRMAN. Yes, we have our chief counsel who has the bill now and is going to try to work out some language here to see if it would be acceptable to Mr. Ripley, and representatives of the Smithsonian and his group here. Under the circumstances we are faced with, with nothing in the budget, the Budget Act will be before the House this week, I doubt whether we can take any action legally in light of the Budget Act provisions, as far as granting an authorization for the \$21,500,000 at this point.

Counsel will be back here in just a moment. They are drafting language now.

Mr. GOLDWATER. Will the gentleman yield?

The CHAIRMAN. Yes.

Mr. GOLDWATER. Pursuant to the discussion that I had with Mr. Ripley, it is my understanding that this money, the money, this \$20 million, wouldn't be in the budget until 1980, which wouldn't have anything to do with the Budget Act this year.

The CHAIRMAN. The bill doesn't provide that.

Mr. MINETA. Did you have some comment, Mr. Ripley?

Mr. RIPLEY. Mr. Chairman, I think we are asking for a construction authorization. I don't think we are asking for a budget item at this time, unless I am entirely wrong.

Mr. MINETA. The thing is that the authorization will carry with it, and the question is in what year the authorization is to occur. That is why we are going to be amending this bill in order to take it into the fiscal year 1980 rather than as reported out by the Senate.

Mr. Applegate, do you have any questions?

Mr. APPLEGATE. No.

Mr. MINETA. Mr. Fary?

Mr. FARY. No questions.

Mr. MINETA. Mr. Bonior?

Mr. BONIOR. No.

Mr. MINETA. Mr. Goldwater?

Mr. GOLDWATER. Mr. Ripley, at least in the Senate report on the purpose of this building it says something about providing instruction to curators.

Is that one of the purposes? I couldn't find where it says that.

Are you going to be doing some training out there for people who run these facilities?

Mr. RIPLEY. Under Public Law 94-98, if that is what you are referring to, Mr. Goldwater—

Mr. GOLDWATER. The thrust of my question was: If that is true, you are going to be doing training and teaching of these people to be curators?

Mr. RIPLEY. Well, we are already doing that, Mr. Goldwater, and we have been, of course, traditionally, as a museum. You can't operate a museum with curators without training other curators. You take these on as technicians, apprentices, whatever it may be, through some grant process and you begin to train them. The same thing applies of course for conservators. The conservators are in effect the people who are going to save the stuff for the next generation. And you do occupy yourselves getting apprentices and assistants to help train the very people—to help and train the very people in the field of conservation.

Now in the sense that we are the national museum, the discussion in the Senate did center around the idea of: What are you doing for the field? What are you doing for museums over the country?

We said we are doing a great deal, in effect, informally.

What can you do formally? Can you get money from the Museum Services Institute or some new organization that will give you money to help to train conservation people?

We pointed out we are already doing that. Someone comes from, let's say, the Los Angeles County Museum to work at the Freer Gallery because we have the best person on Japanese screens there. So then they come and they work there with us.

If we had these larger facilities, we could have four, five, six, eight more. And this in a field in which if we don't pretty soon shake our stumps and get about 200 more conservators coming out of some training area each year, we won't have the material that we now have, 50 years from now. So it is a long-range kind of thing. It is the same thing that plagues the Library of Congress, where 19th century books were printed on paper which is fading away before your eyes because it was so peculiarly made.

I still don't understand the chemistry of it. But we are dealing with this area as best we can now. It is our sincere hope that in this

new facility we will have a little more space, a little more ability to continue to enlarge this and in effect to carry out our national obligations.

Mr. GOLDWATER. How do you interface with the educational system in this particular area?

Mr. RIPLEY. Not so much in the field of conservation, because as Mr. Walsh asked, we don't give degrees. In fact people who are in conservation may not have a degree. They may not be a graduate of a university. They come as craft-oriented persons who wish to learn a discipline that is essentially one of dexterity and visual perception with objects, rather than with the kind of tradition where you have to go and get a B.A., let's say, in modern history or languages.

Mr. GOLDWATER. Do you have a degree in conservatorship?

Mr. RIPLEY. We do not. There are some kind of ad hoc degrees that are given at places like Winter Tower in Delaware, using the facilities of the University of Delaware to give them the accreditation, or Cooperstown, New York where they use part of the State university system to give them some accreditation. We might eventually be able to work something out with the local universities in this sense, but that is for the future.

Mr. GOLDWATER. If you have in the field of archeology, where there are numerous educational institutions that teach archeology, that have grants to go out and do research and these people become expert in preservation, in discovery, why aren't those people candidates for the job at the Smithsonian? Why would you have to take some in to train them? Why can't you provide, in essence, an outlet for these individuals who are experts in that area, or aeronautics, who attend aeronautics school, learn how to build aircraft?

Mr. RIPLEY. But, let me say, Mr. Goldwater, in that connection there are lots of archeologists in this country. We employ some here. Some at the museums in all the States. But they do not spend most of their time putting the pots together. They dig them out and they are in fragments. Ninety-five percent of them stay that way. If you are going to have someone who is a craftsman at trying to get it together, as it were, or restore or prepare an exhibit, that is someone else. The archeologist will say "I don't have time for that. I am doing my research and I am going to write a paper about this, and I will provide the documentation, labels, or I will teach a course, but I am not going to put this stuff together and restore it."

Mr. GOLDWATER. So you get down to the situation where you have to do your own specialized training.

Mr. RIPLEY. It is a do-your-own, that is right.

Mr. MINETA. Are there any further questions from members of the committee?

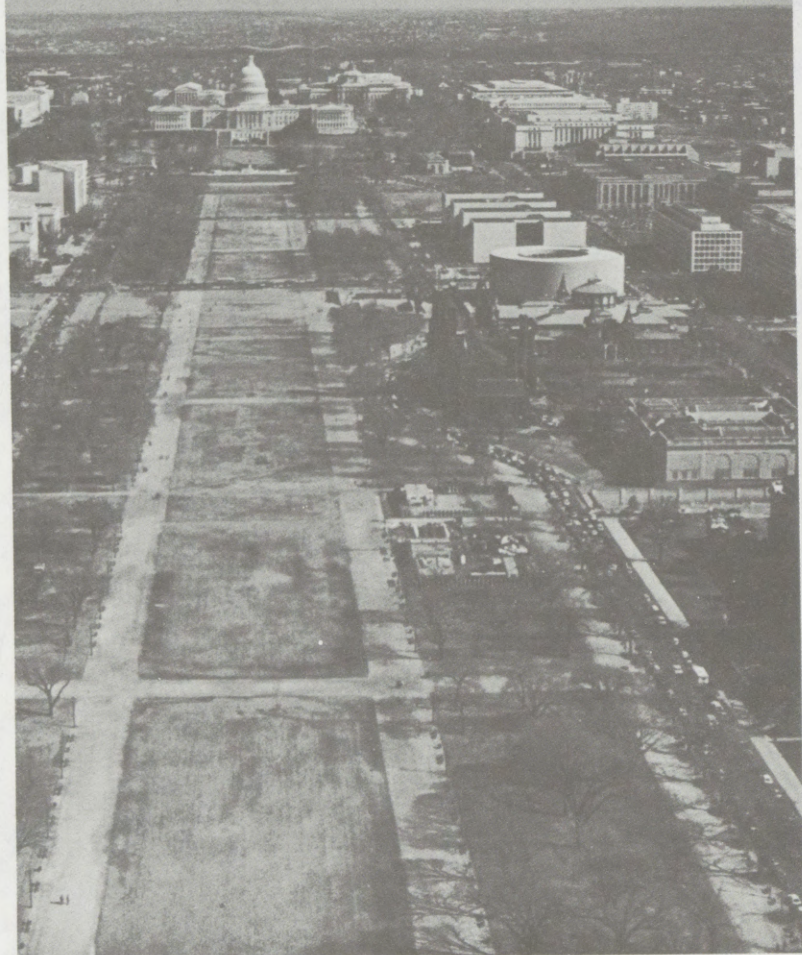
If not, I would like to thank the witnesses for their excellent testimony.

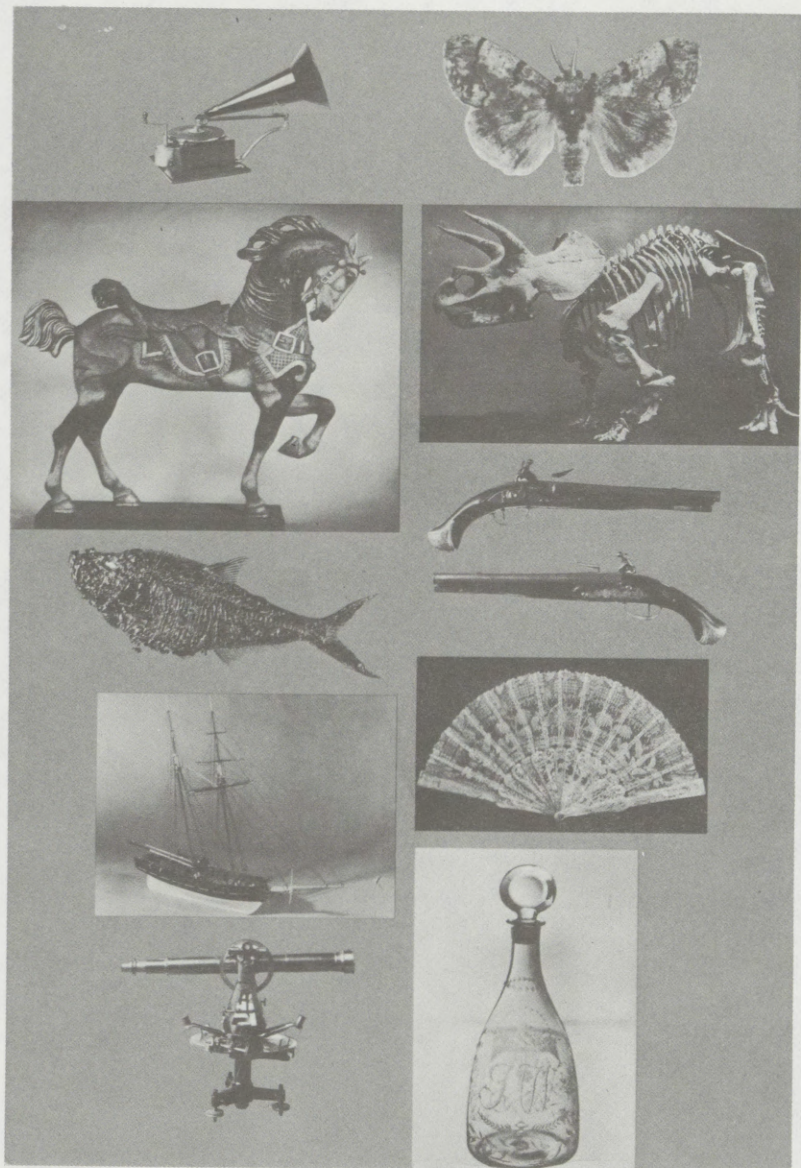
[Whereupon, the subcommittee proceeded to other business.]

Museum Support Center

Smithsonian Institution
Washington, D.C.

for the Storage, Conservation, and
Study of the National Collections





Introduction

Leaf through a scientific journal, historical review, or a daily newspaper, and you are certain to find examples of man reaching beyond present knowledge in pursuit of new insights into past cultures and a clearer understanding of scientific phenomena. Objects made by man, or collected by him from nature, are the tangible products of his struggles to comprehend his environment, extend his mastery over it, improve his condition, and express his spiritual aspirations. The collection, interpretation, and transmission of these objects is essential if this and future generations are to measure and understand the character of cultural and natural change.

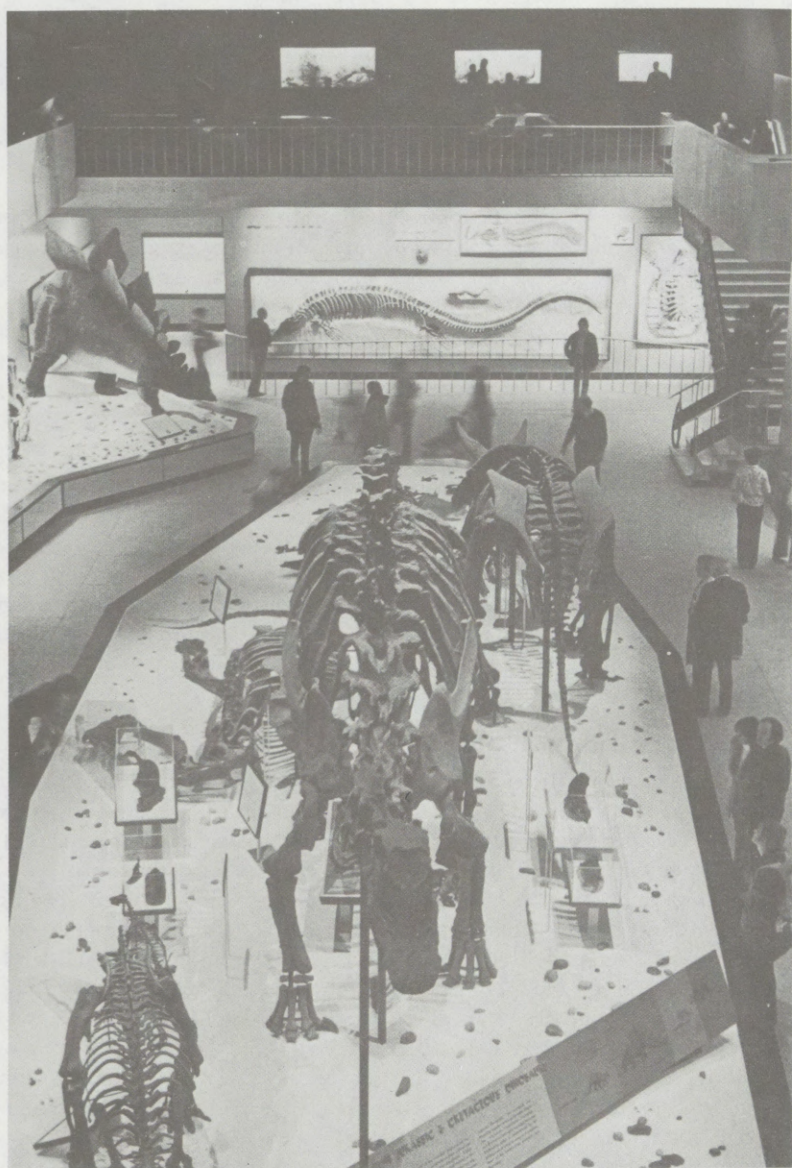
Since its founding over a century ago, the Smithsonian has become one of the world's principal research organizations with interests that range from the systematic study of the fauna, flora, and geology of our planet to the mysteries of outer space; from the study of our scientific, industrial, and historical accomplishments to the collection and study of the evidence of our artistic creativity. The scientific bureaus and the museums of the Smithsonian constitute a unique blending of academic research with the collection, preservation, and interpretation of our material heritage.

Often called the "nation's attic," the Smithsonian rather is one of the Nation's most valuable treasuries. The collections are shared broadly, through permanent displays in ten major museums, through exhibition catalogues and photographs, and through traveling exhibitions. It is a treasury that grows with the activities of creative people and as archaeologists and natural scientists collect the evidence of past and present cultures and of the natural world.

Future generations of scholars and scientists will benefit greatly from today's research and publications, but their efforts to further reveal the truths of natural science and of past cultures cannot depend on published works alone. The objects and specimens that we preserve and pass on to them will be their surest resource for future discoveries. Let me emphasize how great is our responsibility to conserve our collections. To this end we must apply the most advanced techniques known to us, and seek new methods to minimize the unavoidable toll of time. We also must increase the level and quality of training opportunities in all areas of museum management, but especially in conservation. To a great extent the continued survival of collections depends on the availability of trained scientific and technical personnel. We cannot shirk this responsibility.

The proposed Museum Support Center, described in this brochure, is our response to a profoundly felt and urgent need. It reflects our legal and ethical obligation to study, preserve, share, and transmit the uniquely valuable resources that have been entrusted to the Nation's care.

S. DILLON RIPLEY
Secretary



Mr. STEVENS. Well, I do not think you would want us to be there without any working capital. You have to lay out money for productions before you get any money back.

Mr. LEVITAS. The Government has made—and I guess this is the core question we are sort of dancing around here—the Government has made a very substantial investment in the Kennedy Center, and the fact that two Presidents are honored by it, President Kennedy and President Eisenhower—it seems to me almost impossible to believe that this administration or any administration and Congress would allow a default to occur.

But let us assume that a default would occur—

Mr. STEVENS. Well, it is your building, sir, and it belongs to the U.S. Government.

Mr. LEVITAS. What would happen if the Kennedy Center defaulted on the bonds?

Mr. STEVENS. Well, I think it would be up to you, just as GAO asked you to, to make a determination what to do. I mean, the Kennedy Center Trustees do not own anything. This building belongs to the U.S. Government, it is on park land, and the so-called platform is administered by the trustees, of which there are three Members of your House and three Senators and nine other government officials. There are 15 Government officials included in the trustees, and the rest of the trustees are appointed by the President of the United States. We just do the best we can to make the thing work.

Mr. LEVITAS. In your testimony, you say that, "To date, the Kennedy Board has raised more than \$34 million from private sources to construct the building. That is \$7 million more than was required to match the \$23 million Federal appropriation for construction and the supplemental construction claims appropriations of \$3.9 million. Since that time, the Center has raised about \$8.7 million in additional private funds to underwrite the cost of its section 4 responsibilities. Thus, the total private funds raised to date by the trustees over the Federal construction funds appropriated is nearly \$16 million. Since that sum exceeds the Center's present compound interest obligations of approximately \$15 million," you propose that the obligation for this interest be canceled.

Now, with respect to the private funds that have been raised, could you furnish the committee with, say, a breakdown of the sources of those funds?

Mr. STEVENS. Sure. It is pretty much in the GAO report, but any further information you would like, of course, we will make available to you.

Mr. LEVITAS. Could you give us that information for 1978?

Mr. STEVENS. Sure.

Mr. LEVITAS. What is the amount of public funds received by the Kennedy Center in 1978?

Mr. STEVENS. Fiscal 1978? We have got that right here.

Mr. LEVITAS. You can furnish that, too, for the record.

[The following was received for the record:]

John F. Kennedy Center for the Performing Arts schedule of private funding¹

[Not including variations of services]

	<i>Detail</i>
Apr. 1, 1959-June 30, 1960:	
Mr. & Mrs. Floyd Akers	\$100,000
Mrs. Jouett Shouse	116,200
L. Corrin Strong (anonymous)	355,357
Other donations and benefits	387,625
Subtotal	959,182
Fiscal year 1961: Other donations and benefits	288,696
Fiscal year 1962: Other donations and benefits	119,412
Fiscal year 1963:	
American Telephone & Telegraph	100,000
Mrs. Robert Brookings	50,000
C. Douglas Dillon (anonymous)	100,000
Ford Foundation (pledge)	5,000,000
International Business Machines	100,000
National Geographic Society	50,000
Col. C. Michael Paul	100,000
Mrs. Marjorie Merriweather Post	115,000
John D. Rockefeller III	104,000
Hattie M. Strong Foundation (anonymous)	500,000
Other donations, benefits and interest	651,819
Subtotal	6,871,319
Fiscal year 1964:	
Mrs. Geo. R. Brown	50,000
Coca Cola Co.	50,000
Ford Motor Co.	100,000
General Motors Co.	100,000
Kennedy Family	60,000
Lockheed Aircraft Co.	50,000
Martin Marietta (cement)	50,000
Mrs. Agnes Meyer	50,000
Eugene & Agnes Meyer Foundation	100,000
Old Dominion Foundation (Paul Mellon)	500,000
R.C.A. (record royalties)	122,000
Rockefeller Foundation	1,000,000
Rockwell Corp.	50,000
Jos. E. Seagrams & Sons, Inc.	70,000
Hiram Walker & Sons	50,000
Robert W. Woodruff	50,000
Foreign gifts	1,168,000
Other donations, benefits and interest	2,926,330
Subtotal	6,546,830
Fiscal year 1965:	
Capt. & Mrs. Peter Belin	100,000
E. I. du Pont de Nemours	50,000
Elizabeth Houghton (anonymous)	50,000
Joseph P. Kennedy Foundation	500,000
Mrs. Albert D. Lasker	100,000
Reynolds Metals (aluminum)	73,500

Why Do We Need Collections?

How Are They Used?

Objects are to museums what books and manuscripts are to libraries. Collections of objects and works of art represent the physical evidence of man's inventiveness and creativity and the environment in which he has evolved. Without objects, we would be unable to understand natural processes or the aspirations and achievements of the civilizations which preceded ours and which document our common origin and heritage. With objects, we can — through direct observation and tactile experience — grasp with greater clarity a sense of the forces that help to shape those civilizations. The knowledge we get from the study of these objects provides new perspectives for understanding and influencing the directions in which mankind is moving.

Man is biologically and chemically an integral part of the network of life on earth. Man is intimately linked to other animals and plants, not solely because he relies on them as sources of food, but because he operates by the same biological and chemical rules and is subject to the same limitations. Ecology and evolution lie at the heart of natural history, and what we know of the natural world is documented by specimens — fragments of nature through time and space. These fragments are a basic resource for ecological and evolutionary research. They are constantly used by investigators in their search for more information and data to apply to increasingly complex problems brought on by population growth, environmental change, and diminishing resources.

That a large study collection of biological specimens should one day prove



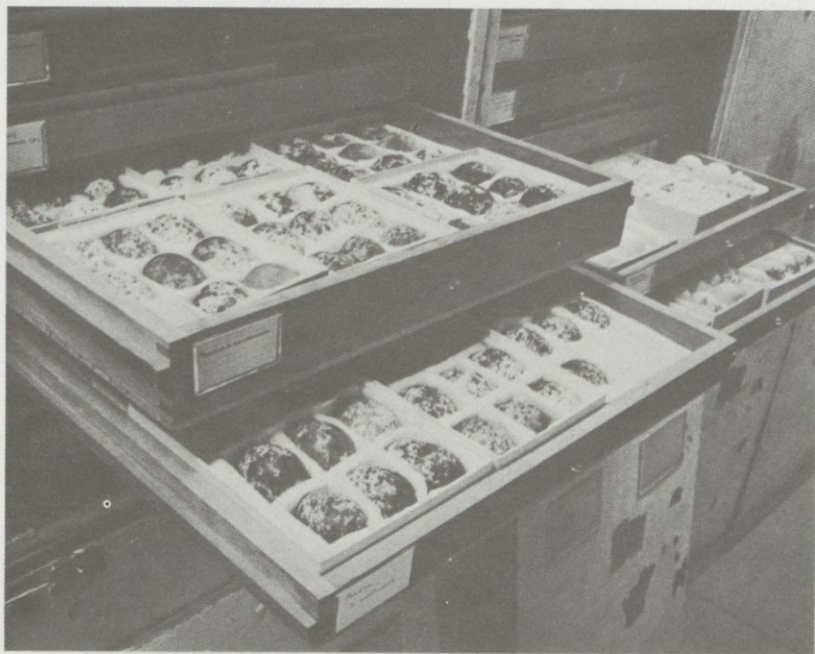
A collection of specimens.

to be of critical importance in monitoring man's use of his environment was barely foreseeable at the time the National Museum was founded. Today, however, the systematic collections of the National Museum of Natural History play a significant role in our scientific attempts to improve the environment.

For example, the pesticide DDT and its derivatives have recently been identified as the responsible culprits in reducing reproduction in many species of birds — even threatening some species with extinction. The examination of specimens in the ornithological collections supported this discovery and revealed that pre-pesticide eggshells are demonstrably thicker than those of the same kinds of birds in today's environment. This, and other evidence from collections, both old and new, supports the theory that DDT alters the birds' thyroid-controlled calcium metabolism, causing a dramatic reduction in shell thickness. Because of the thinner walls, many of the shells break during the incubation period.

Another illustration of the value of benchmark collections can be seen in the study of amounts of lead absorbed by man and animals in pre-industrial times. Since lead accumulates in hair, the skins of mammal collections and even human mummies can provide invaluable evidence and data.

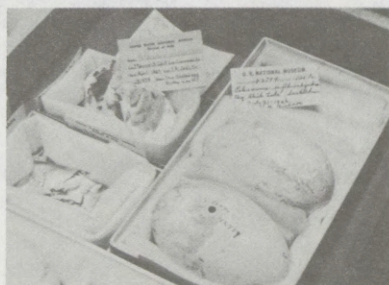
These examples represent only the tip of the iceberg: the use of well-documented collections for establishing ecological baselines has unlimited potential.



A collection of osprey eggs.



A collection of mammal skins.



*Pelican eggs from 1906 and 1969.
Notice the crushed, thin shells of
recent eggs.*

Many species of mammals are threatened with extinction in their natural environment. The mammal specimens shown here are equally endangered by the unstable environment of their attic storage. In addition, access to them is difficult for both conservation and study.



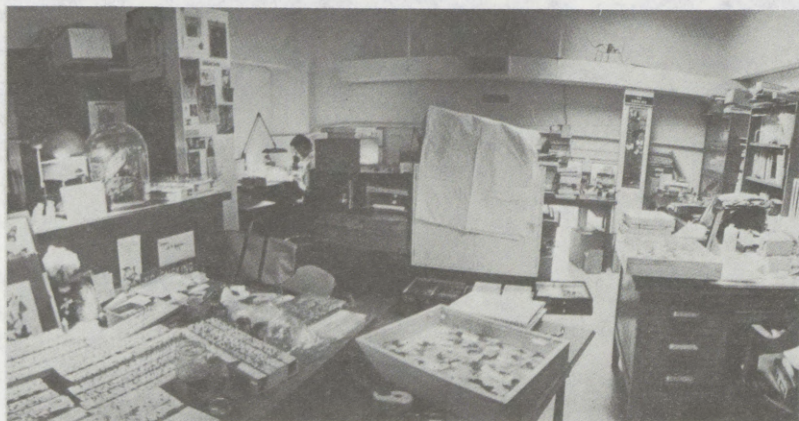
Why Must Collections Grow?

The primary role of a museum is to collect, preserve, study, interpret, and share the evidence represented by its collections. In every respect, the museums of the Smithsonian have performed each of these essential tasks and the National Collections now housed in them are an irreplaceable assemblage of objects representing an encyclopedic array of disciplines. Through the study of these holdings, knowledge has been extended, sensitivities stimulated and insights deepened. For future generations, these collections will be standards against which to view the past, gauge their own accomplishments, and measure natural and cultural changes.

Museums are facing new challenges brought about by the rapid changes occurring on our planet, the ever-diminishing size of naturally unspoiled areas, and the encroachments of industrial and urban activity. These are all leading to the rapid destruction of flora and fauna, and to the loss of natural, archaeological, and historic sites. Museums must collect the objects and specimens that testify to these threatened or vanishing resources or they will be lost forever.

It is the choice of objects selected and retained which, to a great extent, is the measure of a museum's contribution to society. Inevitably, as the numbers of collections grow and the opportunity of gaining knowledge from them increases, the difficulty of managing these resources multiplies.

More critically perhaps than most other museums, the Smithsonian must face the realities of these problems and the challenges they present, not only because of a sense of leadership within the museum community but because of the inherent value of the knowledge contained in its collections and the importance of that knowledge to present and future generations.



An entomologist in his crowded laboratory.

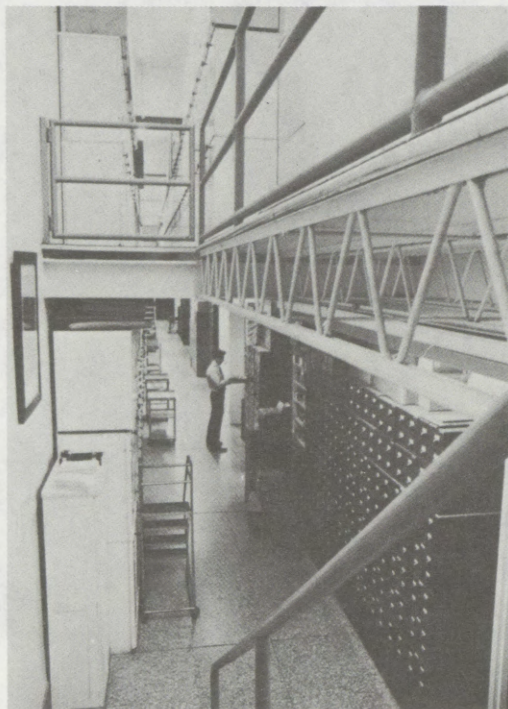
*A gallery in the National Museum
of Natural History.*



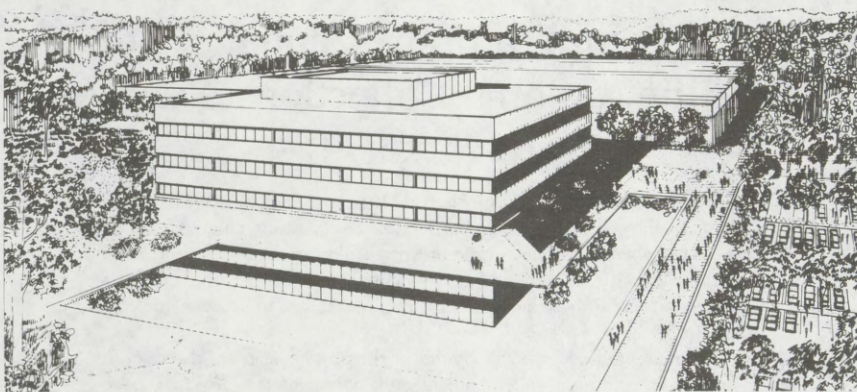
A Museum Support Center for the National Collections

The Smithsonian Institution has had 130 years of experience with collections, the need for them, and their uses. The Institution has accepted the responsibilities to develop and preserve collections required for research and for the scientific, cultural, and technological record. At the same time, it has consistently resisted the acquisition of collections judged unnecessary or inappropriate.

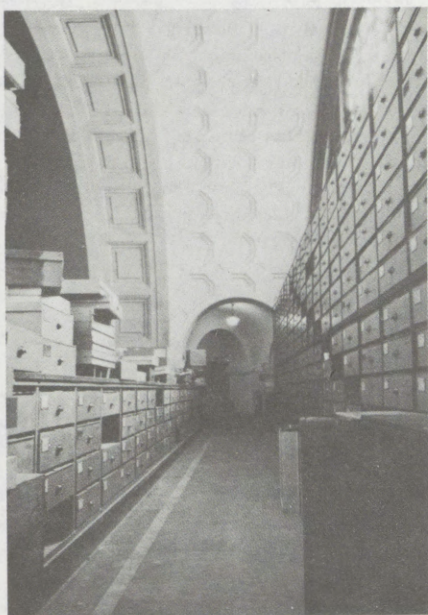
The museum and gallery activities of the Smithsonian are dedicated to public use, for education, enlightenment, and enjoyment. It is clear that collections, and the space in which to exhibit them, are needed for these activities. No less essential are well-planned facilities, with up-to-date environmental controls for education, conservation, research and study, and particularly for the storage of collections. The staff of the Institution has diligently attempted to make economic and efficient use of spaces presently available for these functions, but these are now fully occupied, and it has become necessary to encroach on public galleries and hallways to carry out essential tasks. As public visitation and collections continue to grow, these areas must be returned to public use, and new space must be created in which to properly house, conserve, and document objects and specimens, to make them available for research and the publications that are the direct result of scholarly investigation.



*Former exhibit hall in the
National Museum of Natural
History, now decked and converted
to storage and work space.*



Artist's rendition of a possible configuration of the Museum Support Center. In the forefront are the laboratory and office facilities. In the background, the storage component. The pond is part of the drainage control system for the site and will be used, as well, for ecological studies.



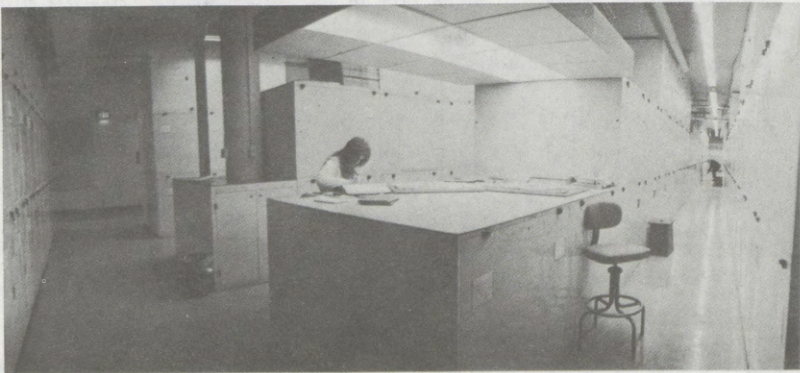
Makeshift storage on the balcony of the Rotunda of the National Museum of Natural History. Note the complete lack of environmental controls, adequate lighting, and the intrusion into a major passageway.

Components of the Museum Support Center

Over a period of eighteen months, members of the Smithsonian staff and a consortium of consultants surveyed the Institution's existing and available facilities and measured its space requirements. The results of this assessment indicate that a project costing \$21,500,000, including planning expenses, some furnishings and equipment, and an amount for contingencies, would produce approximately 338,000 square feet of storage, office, laboratory, and conservation space to meet the Institution's most urgent needs.

I. STORAGE. The fundamental purpose of the Museum Support Center is to provide space for the storage of collections in a facility planned to make them efficiently accessible for study and proper conservation. This emphasis on space for collections storage reflects a high priority need to reclaim on-the-Mall exhibit areas, attics, hallways, basements, and workrooms now encumbered with poorly and hazardously housed, and often inaccessible, specimens and objects. The proposed Museum Support Center will make available a major amount of new storage space specifically designed for the proper housing and care of collections. This will be accomplished in a utilitarian, single-story, double-decked structure containing a total of 239,000 square feet of space. Within the structure, 187,000 square feet will be allotted for storage purposes to the National Museum of Natural History, 28,000 square feet to the National Museum of History and Technology, and 24,000 feet to other museums and galleries of the Institution.

The National Museum of Natural History has tentatively designated the following percentages of its departmental collections for transfer to the Center: anthropology 95%, botany 25%, entomology 60%, invertebrate zoology 20%,



Example of well-planned museum storage, in a controlled environment, made safer by closed cabinets.

A crowded storeroom being used as a sorting and study area in the National Museum of Natural History.



Archaeological excavations often produce an overwhelming number of specimens. These must be sorted, numbered, identified, studied, and compared. Some, after extensive research, may be discarded, but a large portion must be retained for documentary purposes and to provide an opportunity to future scholars to assess the completeness of previous research.



mineral sciences 50%, paleobiology 20%, and vertebrate zoology 20%. Relocation of these collections will release approximately 40,000 square feet of prime exhibit space in the Museum of Natural History and thus increase by approximately 19% the Museum's capability to present exhibits to its growing number of visitors, who now number over 4.5 million a year. Freeing this space will also be of substantial benefit to the educational and research activities conducted on the Mall and will permit an improved level of care for the collections which will remain in the Mall museums.

II. RESEARCH. Providing adequate space for collections storage fulfills only part of the need. It is equally as urgent to provide space for strong research and study programs based on the collections to be housed in the Center. This will be achieved by including in an adjoining building approximately 31,000 square feet of offices and 38,000 square feet of laboratories for the professional and technical staff associated directly with the collections. This space will also accommodate the Smithsonian Oceanographic Sorting Center which would be moved from its present costly rented quarters to a more efficient adjacency to related program elements of the Museum of Natural History located in the Center.

III. CONSERVATION. An essential component of the Center is an area of approximately 31,000 square feet to be used for conservation purposes. Included in this first space increment for conservation will be a collections receiving and fumigation unit, a conservation information referral center, space for the treatment of objects and research on conservation techniques, and a major facility for training staff and visiting interns in scientific theory and practical conservation skills.

Research on the crowded work benches of the Conservation Analytical Laboratory. Note that every inch of usable space has been occupied in this unstaged photograph.



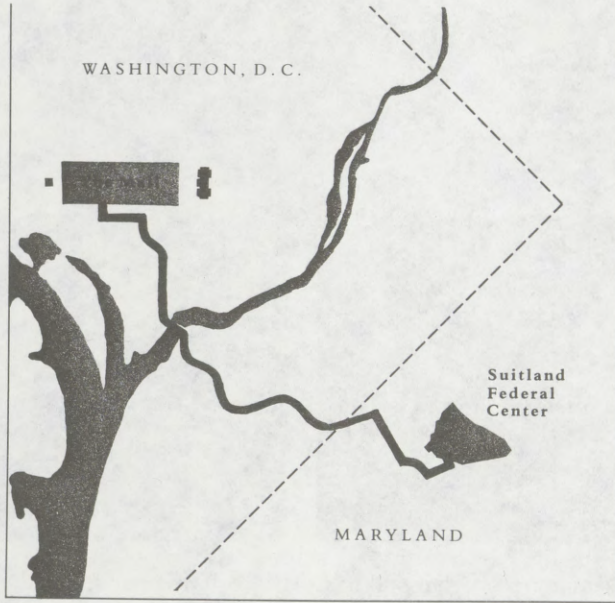
Smithsonian staff and student interns from George Washington University in the Conservation Laboratory of the Department of Anthropology. Note the limited space available to treat large objects.



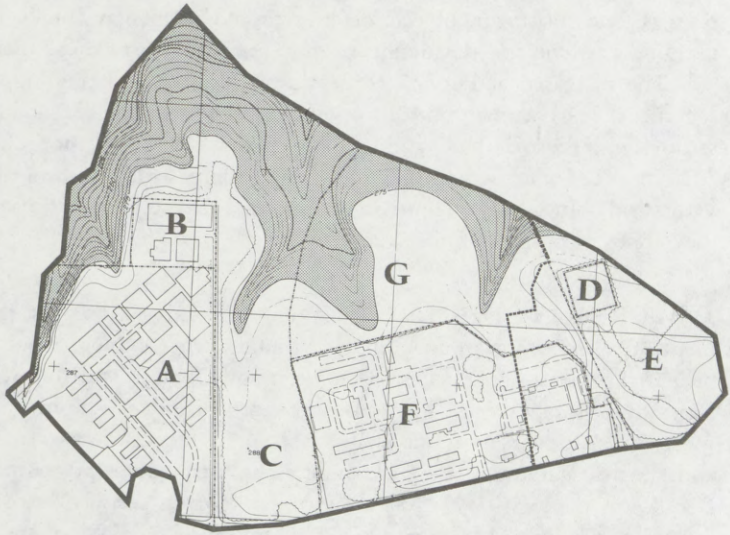
Conservation research is multifaceted; it requires an understanding of form and style, usage, origin, and age, and demands a thorough knowledge of materials and their composition and structure. Without proper conservation research and treatment, objects deteriorate and often may totally lose their usefulness as scholarly documents or their capacity to convey aesthetic values.

The increased activity in conservation research and training, bringing together the Department of Anthropology's processing and conservation laboratories with those of the Oceanographic Sorting Center and the Conservation Analytical Laboratory, will open new opportunities for Smithsonian conservators and trainees and will provide for the care that collections must receive if they are to be of use to future generations.

IV. RELATED FUNCTIONS. In active museums, the movement of collections is an unending, continuing process. New acquisitions are delivered, objects are transferred between conservation and research laboratories and storage areas, loans must be organized for shipment to other museums or to scholars at universities, specimens must be drawn from storage and taken to curatorial study areas, or perhaps to exhibit preparation shops. Because of the high level of care that must be exercised at every step, these functions require special facilities for shipping and receiving, packing and unpacking, checking, registering and photographing, fumigating, processing, and distribution. The Museum Support Center will provide the Institution with a well-planned facility to assure greater safety for all objects while in movement and in storage.



Map showing the relationship between the Mall and the proposed Silver Hill facility.



The Silver Hill Site in Suitland, Maryland

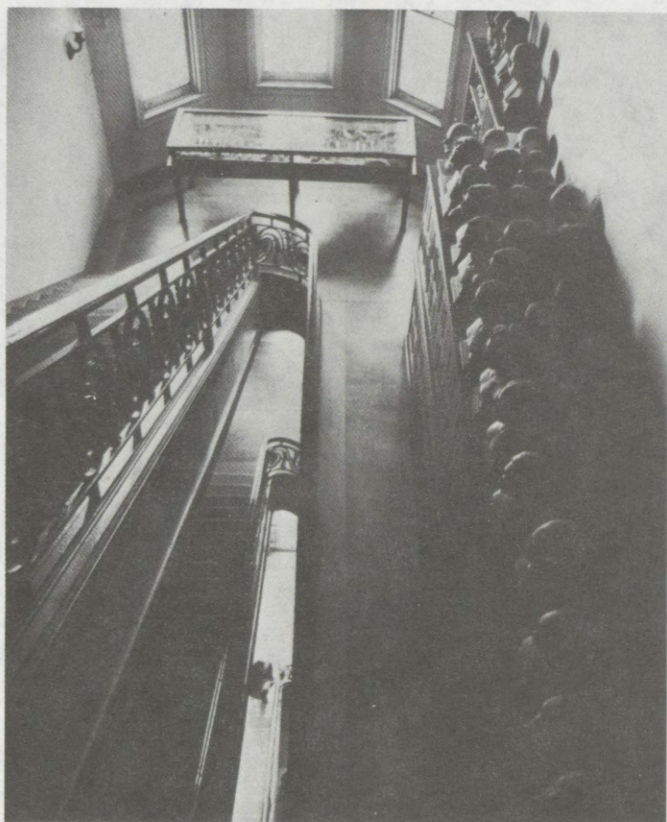
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|---|--|--|
| <p>A. National Air and Space Museum storage and restoration facilities. (21 acres)</p> <p>B. Transferred by General Services Administration to the Smithsonian Institution in 1976. (4 acres)</p> | <p>C. Transferred by General Services Administration to the Smithsonian Institution in 1976. (31 acres)</p> <p>D. Retained by the Department of the Army. (1 acre)</p> <p>E. Retained by the National Park Service. (13 acres)</p> | <p>F. Currently under jurisdiction of Department of the Army. Excessed for transfer to the Institution in 1977. (21 acres)</p> <p>G. Transferred by General Services Administration to the Smithsonian Institution in 1976. (26 acres)</p> |
|---|--|--|

The Location

Most of the Smithsonian's museum activities in Washington are centered on or near the Mall, an area dedicated to public use and enjoyment. A site suitable for the Museum Support Center is being acquired on government-owned land at the Suitland Federal Center, Silver Hill, Maryland. The 1971 master plan of the General Services Administration for the Suitland Federal Center includes a reservation for the development of these museum support facilities. The site is adjacent to the existing storage and restoration facility of the National Air and Space Museum, and is only six and a half miles and less than a twenty-minute drive from the Mall.

Construction of the Museum Support Center at Suitland will enable the Institution to concentrate its support facilities, avoid unnecessary transportation costs, minimize administrative and operating expenses, and insure the well-being of the National Collections. Building at this location will also contribute a major cultural and scientific resource to Prince Georges County.

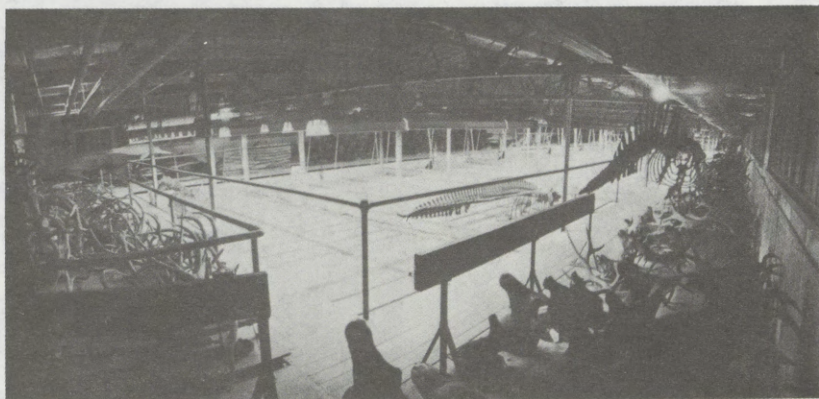
A public stairway being used to store anthropological collections.



In summary . . .

For more than ten years the Smithsonian has urged in various ways the construction of off-Mall support facilities. During that time the Institution has made every effort to exploit to the fullest all of its available space. The critical point has been reached. Unless facilities are created, the Smithsonian, the public, the student, and the scholarly community will all be the losers. To continue the collection and preservation of objects and of specimens representative of nature and of civilization, to sustain research and to present exhibits which will educate and enlighten — the prompt construction of the Museum Support Center is essential.

The nation cannot allow the priceless collections that have been entrusted to its care to be further jeopardized by facilities that are inadequate for their conservation and study.

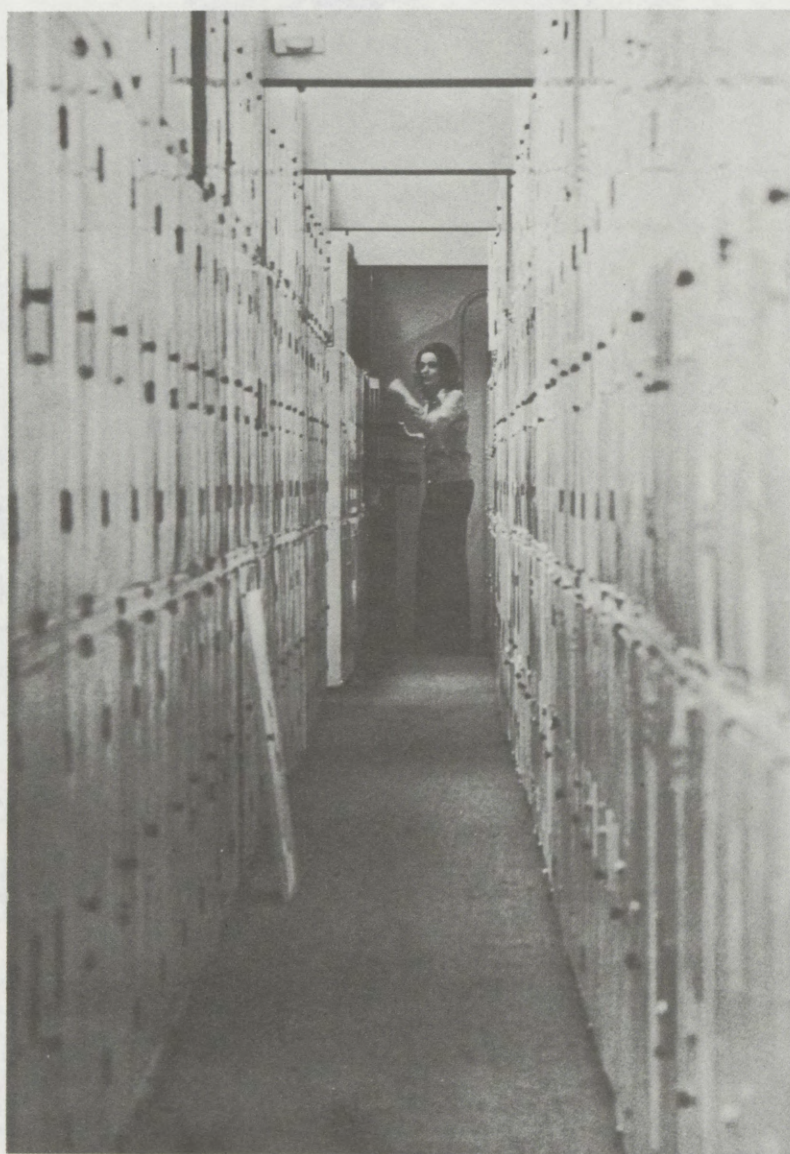


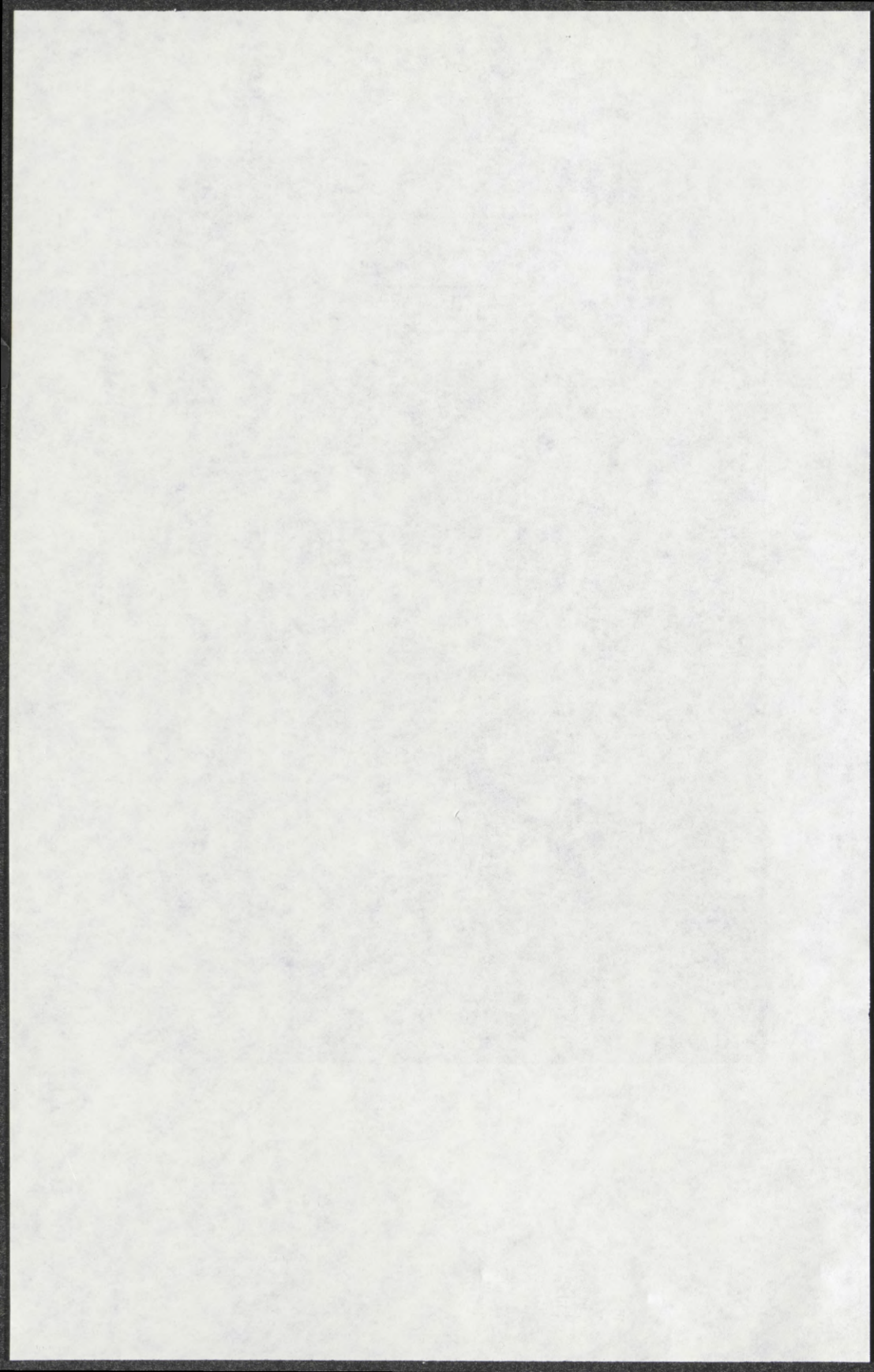
Unventilated attic above exhibit halls.

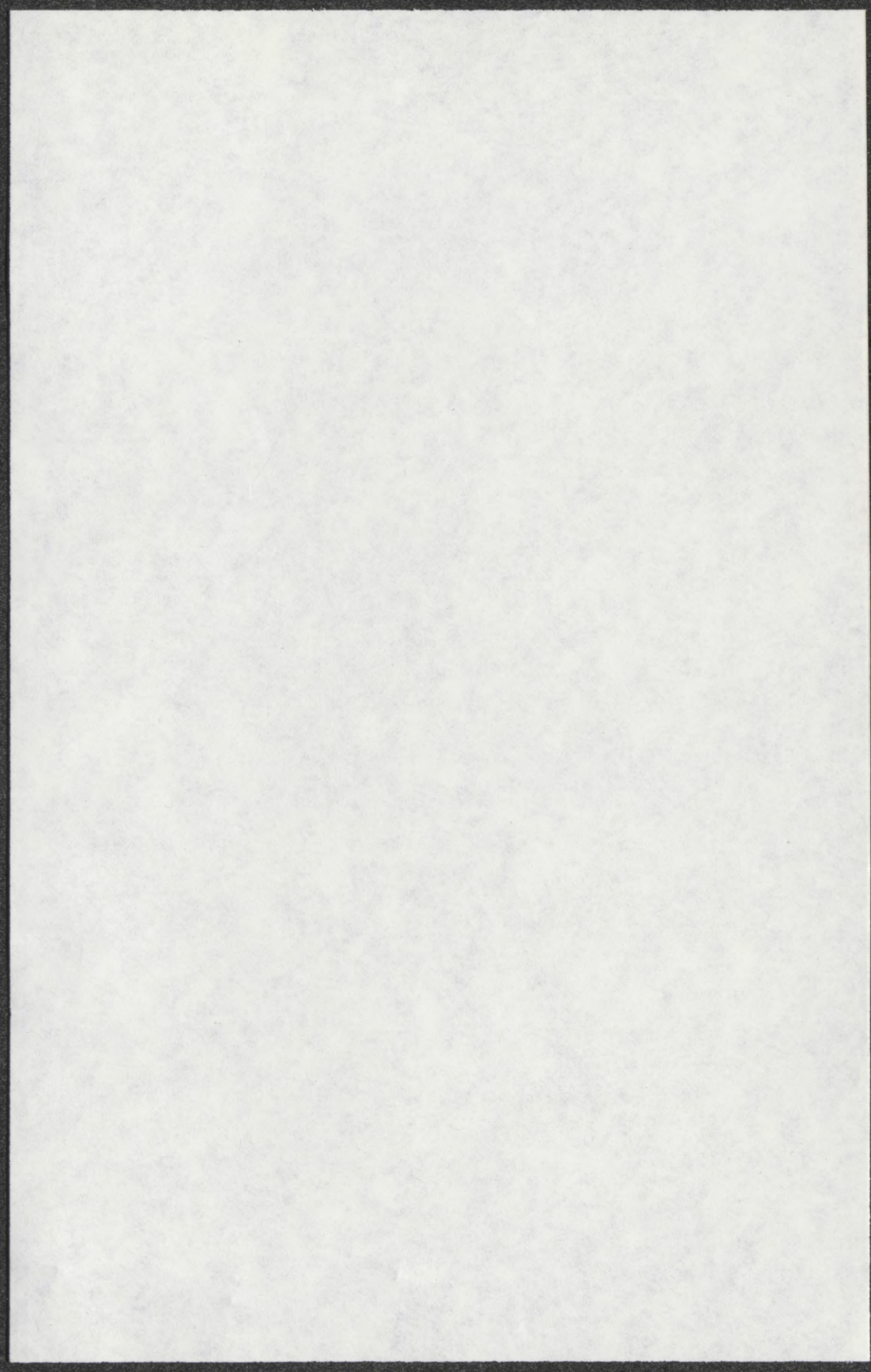
Existing storage with insufficient space for the safe study or handling of objects.

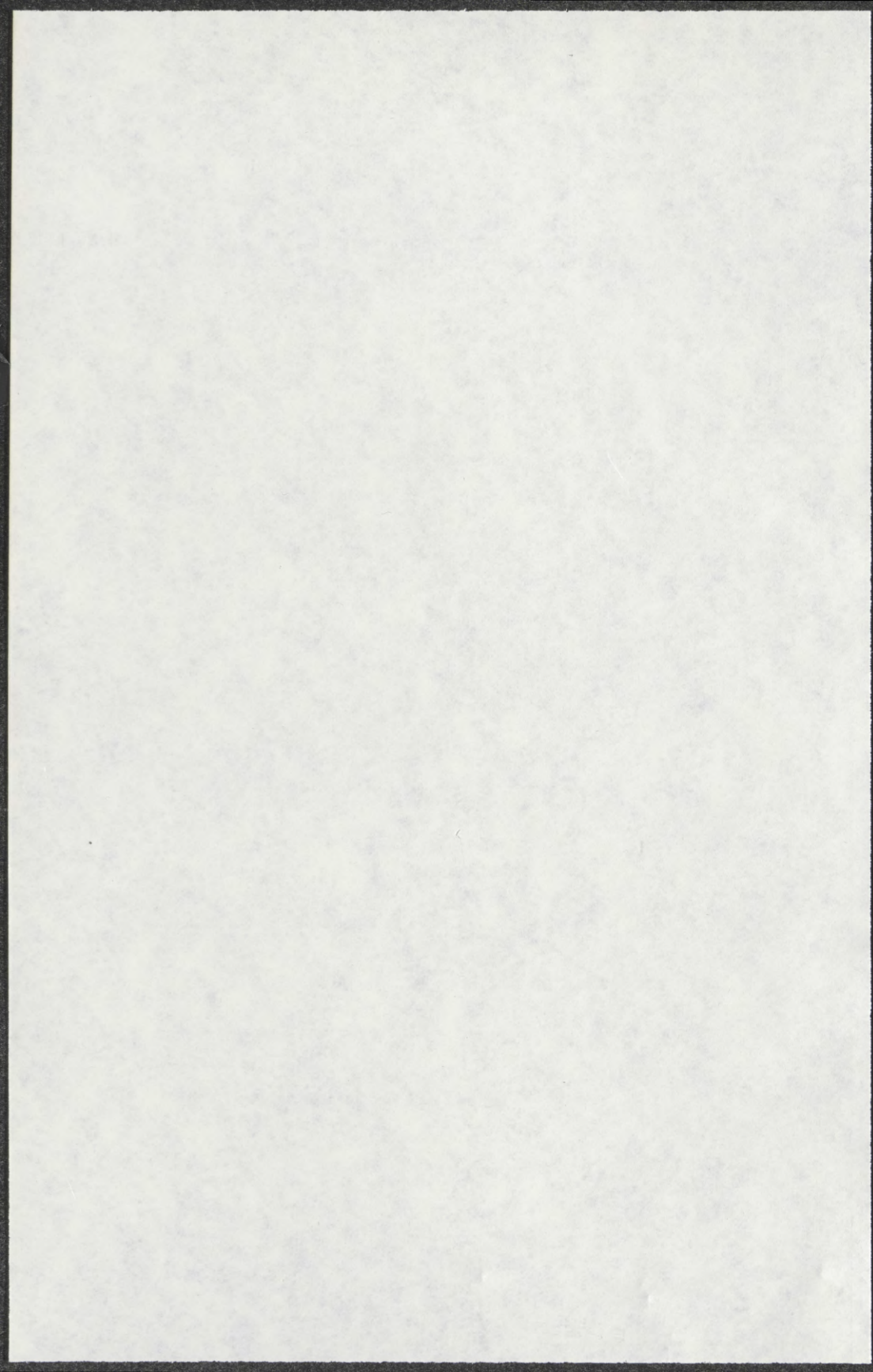
Published by the Smithsonian Institution Press

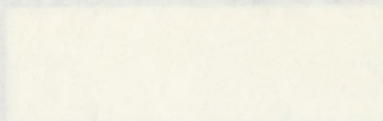
Designed by Gerard A. Valerio













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