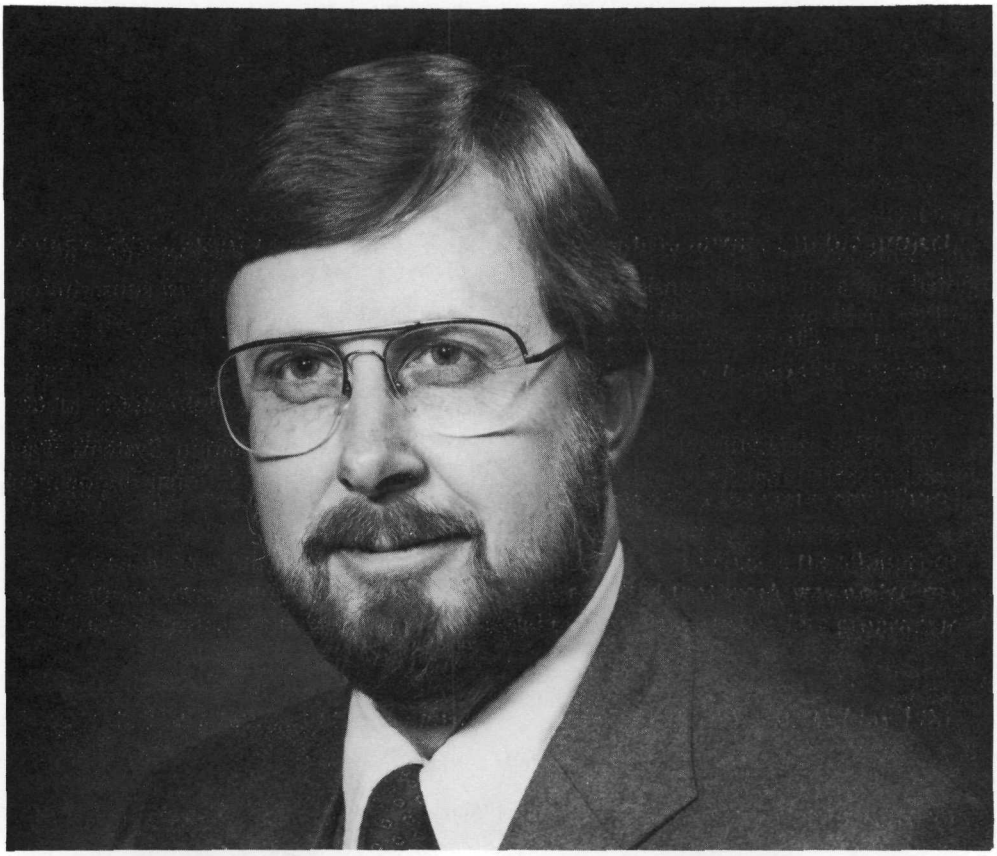

EDWARD WELDON

President, Society of American Archivists
1981–82

Deputy Archivist of the United States since 1980, Edward Weldon has served as New York State Archivist, 1975-80; Chief of the Editorial Branch of the National Archives and Records Service, 1973-74; Senior Appraisal Archivist at NARS, 1971-73; and Chief of NARS's Regional Archival Branch in Atlanta, 1969-71. He holds an A.B. degree from Oberlin College and M.A. and Ph.D. degrees from Emory University. He has served on SAA's Council for four years and on numerous SAA committees. He became a Fellow of the Society in 1974. He served as Editor of the *American Archivist* from 1971-75 and was elected Vice President of the Society in 1980. He was a member of the Board of Directors of the National Association of State Archivists and Records Administrators from 1977-80 and served on the National Historical Publications and Records Commission from 1978-80. He was a delegate to the White House Conference on Library and Information Services in 1979. He is a member of the Mid-Atlantic Regional Archives Conference, the American Historical Association, the Organization of American Historians, and the American Association for State and Local History.

Adaptive Reuse of Old Buildings for Archives

JAY HAYMOND

FIVE YEARS AGO, the Utah State Historical Society (USHS) began to seek additional space in response to the age-old pressures of collection growth and increased patron use. Since 1957, USHS had lived and carried on its official activities in a beautiful old mansion built in 1902 for Thomas Kearns, the mining magnate. The Kearns family lived in the 28-room house on Salt Lake City's avenue of affluence—South Temple Street—for 35 years before turning the property over to the State of Utah for use as a governor's mansion.

As a public building, the Kearns mansion is a state treasure with wood and marble appointments to suit the elite. As a repository for manuscripts in a "special history library," the space arrangement presented problems of security and access that were tolerated by the library staff for 21 years. The small collection of manuscripts, about 1,000 linear feet, held by the USHS was housed in the basement where the bowling alley had been. Because the Kearns family had between 10 and 15 servants to wait on them, elevators were never installed. Stairway access meant that the archives staff lifted more than 10,000 pounds per year in the process of filling user requests. Security was always a headache, and the published material section sustained regrettable losses.

The motivation to move was strong. The Kearns mansion may have been designed with suitable living space, but its adaptability to office use was imperfect. The opportunity to find new quarters would give USHS a chance to grow in a facility that would better accommodate its programs.

We started looking, slowly at first, for a building large enough to house USHS's expanding operations. We required a structure that would meet our expected growth for 10 years, a cost that the legislature would accept, a building with historical presence, a location within the state's capital city, and a potential for flexible use. Candidates included an abandoned railway depot, junior high schools, and a vacant church. After a period of time, USHS settled upon the Rio Grande Depot and secured $2.5 million from the legislature for the

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Thomas Kearns mansion, ca. 1905. Photograph courtesy of the Utah State Historical Society (USHS).

renovation work. We have now moved into the renovated old depot, and the experience of planning and beginning the renovation provides the basis for my comments about the adaptive reuse of buildings for archives. I hope that this may aid others contemplating a similar move.[1]

Let me say at the outset that as much as I believe that adaptive reuse of old buildings must be a feature of institutional planning in America, the reuse of older structures for housing archives and manuscript collections presents challenges that tax the intellect and patience of those wishing to do so. Nevertheless, there are several important reasons to consider reusing old buildings to make new homes for archives. Often, for example, old buildings can be found well within the established community. This allows an institution to take advantage of the existing infrastructure, providing a higher level of service to the archives and its employees. The urban setting can have its drawbacks, too, of coure. Many buildings suitable for archives are located in neighborhoods

[1]Helpful reading includes John W. Boyd, "The Trains Don't Stop Here Anymore," *Museum News* (November 1973): 16-20; Hardy, Holzman, Pfeiffer Associates, *Reusing Railroad Stations* (New York: Educational Facilities Laboratory, 1974); Andy Leon Hardy, "Adaptive Use: Saving Energy (And Money) As Well As Historic Buildings," *AIA Journal* (August 1974): 49-54; and Morris Ketchen, Jr., "Recycling and Restoring Landmarks: An Architectural Challenge and Opportunity," *AIA Journal* (September 1975): 31-39. AIA is the American Institute of Architects.

whose residents are disrespectful of cultural institutions and their staffs. Scheduling service hours after daylight in such cases presents security problems for staff and patrons alike. In our case, the advantages of locating where we did in the capital city outweighed the disadvantages.

A second reason to consider seriously the reuse alternative is the tax advantage offered by the federal government to private organizations for the renovation of historic buildings. For their part, public institutions can qualify for grants to cover up to 50 percent of renovation costs. The Department of the Interior, through the National Park Service in Washington, D.C., provides information about tax benefits and funds for restoration. Typically, each state's office of historic preservation handles information about these resources.

Perhaps the most compelling advantage of reuse is that renovating an old building is less expensive than new construction and includes substantial energy savings. Space cost for new construction is hard to estimate because of differences in regional conditions and the availability of money. Warehouse-type buildings can cost from thirty to fifty dollars per square foot. Renovation of older buildings for office space, however, currently costs about twenty dollars per square foot in the Intermountain West. This is especially true for structures that need minimal finish work on a significant portion of the space, such as the stack area for an archives. A substantial savings can be gained by adjusting taste to such things

USHS stack area in the former bowling alley of the Kearns mansion. Photograph courtesy of USHS.

as unfinished brick walls, exposed plumbing and other utility ducts, rough ceilings, and small outside windows. Actually, the small windows work to the advantage of energy-conscious archivists, because most heat loss occurs through glass. Another energy-saving feature is derived from not having to manufacture building materials such as brick, production of which requires much energy, and finish materials like lath, plaster, cement, and glass.

The challenges of adapting an old structure are both formidable and exciting. They relate most broadly to the task of fitting an archives operation into available space, rather than designing the space to fit the operation. The ability to meet the challenges rests fundamentally on intelligent planning.

An essential part of planning for the future is to collect information about your collection program needs. A clearly defined collecting policy, for instance, will enable you to forecast more accurately your institution's space requirements. Accurate patron statistics gathered over a period of time will yield data about user load and trends. With reliable information on the range of archival activity, planning begins in earnest. Several questions must be addressed, including how much can be accessioned or processed annually, what material is in danger of being destroyed from one cause or another, what space is available, what patron demands will be, and what are the reasonable expectations of growth in staff and funding. Planners will also have to consider environmental control systems, security requirements, and provisions for the handicapped as mandated by Section 504 of the Rehabilitation Act of 1973. There are many, many more questions, too; educated guesses are better than nothing at all. This vital information will not only help determine the type, size, and location of the building selected, but it also will prove essential in subsequent negotiations with architects. Last, but by no means least, is the plan's function as a way to make the case for archival needs to the community and to those who control archival budgets. Excuses like "we didn't know we would grow so fast" fall on deaf ears. Planning allows one to anticipate needs and to support requests for remedies.

It is also important to realize that plans will change. USHS began with a concept of an ideal facility featuring a balanced mix of office space, work areas, work flow, reading rooms, stacks, and environmental systems. The realities of a tight budget soon diminished this dream, and we began cutting design features, sometimes a bit unsystematically. As one item after another was eliminated, the original concept gradually had to be completely reworked. Eventually, we realized that planning for the adaptive reuse of an historic structure should begin with the absolute necessities and result in a design that allows later addition of those items that would improve the functioning of the archives. This requires a flexible, initial design with such features as roughed-in plumbing, elevators, unfinished floors, and a heating/cooling system big enough to handle future expansion.

Once the plan begins to become reality, the archives administrator will confront a number of practical considerations requiring clear thinking, adaptability, and, more often than not, money. Although careful planning is required in any construction, renovation involves several special problems. Old buildings, for example, often have poorly fitting windows and frames which allow energy loss and counteract environmental control within the building. Few old buildings have ade-

quate insulation, and many have none at all. Budget-conscious administrators will be forced to remedy these deficiencies.

USHS's experience in developing environmental controls for the old railroad depot illustrates the nature of these practical considerations in renovation. The depot had tall, leaky windows on the second floor where our stacks and reading room are located. Ideally, a stack area should be windowless and well-insulated, and the environmental controls for our proposed stack area presented quite a dilemma. The renovation's mechanical engineer solved this difficulty, however, by designing a six-zone proportional air system with precise control over fluctuations in temperature and humidity. These six zones will allow us to ameliorate temperature differentials caused by the sun as it warms the building's eastern face in the morning and western face in the evening.

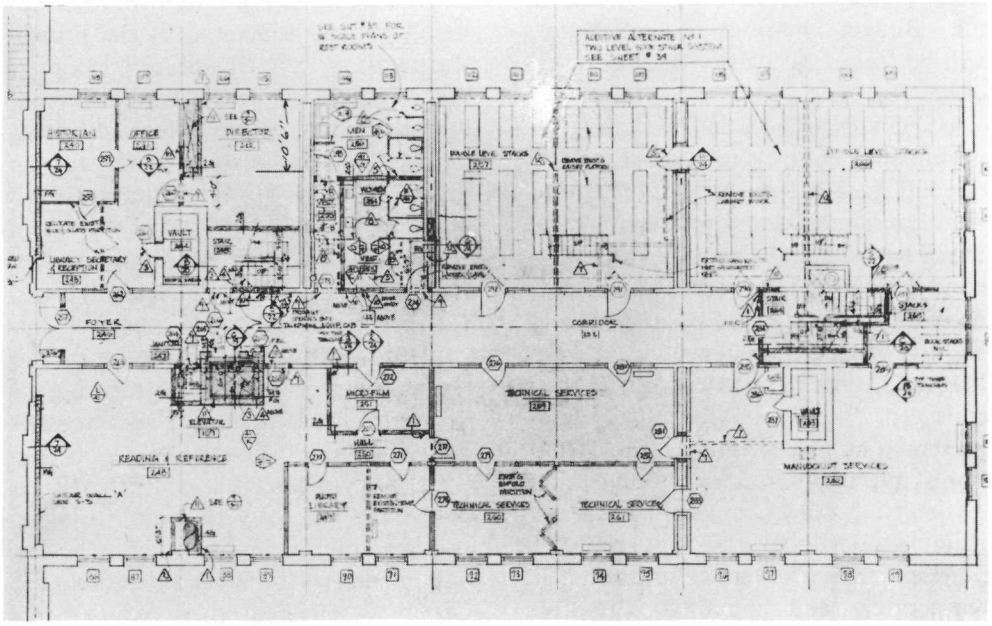
With the problems of temperature and humidity fluctuation adequately addressed, we turned our attention to air filtration. From the local office of the Environmental Protection Agency we learned, surprisingly, that ozone tops the list as the worst gaseous pollutant in our area (with sulphur dioxide and the nitrous oxides not far behind). Dust is our worst particulate pollutant. Initially, an electrostatic precipitator for particulates seemed a good possibility, but precipitators produce ozone—already our worst air problem. A bag-type filter, used frequently in hospitals, proved to be the best solution. It would have to be cleaned occasionally, but it would be at least as efficient as a precipitator and would be capable of removing 98 percent of the particulates.

There were several options for gas filtration, and we settled on one recommended by the Library of Congress Preservation Office: an alumina-impregnated-with-potassium-permanganate filter manufactured by the Purafil Corporation of Chamblee, Georgia. Although the gas filters would have to be periodically replaced, they were compact, produced less resistance to the heating/cooling blowers, and removed 85 percent of pollutant gases.

Adaptive reuse of buildings can also involve several other practical concerns. Current electrical code requirements could dictate an extensive, if not a complete, rewiring job. Codes for cultural institutions and historic structures can be relaxed to some degree by negotiation with individual enforcement officers who have authority to grant variances for historic structures. Usually requirements for archival operations are not much different than requirements for the portions of the building used by patrons and staff.

Utility codes vary from place to place and must be consulted during planning. Plumbing codes have not changed much, but plumbing has. If the structure under consideration is more than 50 years old, a careful check for deteriorating sewer drains is advisable, and the location and load capacity of the main outlet should be ascertained to avoid encountering problems after the basement has been filled with records. Steam pipes should be examined carefully if the building has steam heat. Pressure pipes deteriorate on a precipitous curve so that they may work one day and not the next. Water and sewer pipes, before they become unserviceable, develop damp spots or seeps.

Fire protection devices are often required by code, but the specifications vary. Variances, however, can be obtained in some cases through appeals to local zoning boards. Sprinkler systems are undesirable for use in records storage areas unless special kinds of triggering devices are installed. Records in most storage situations are not a com-



Floor plan of the north wing, second floor of the depot. Photograph courtesy of USHS.

bustible load; damage to them usually comes from water. Yet manufacturers of sprinkling systems have a strong lobby, and the fear of fire plagues us all.

Seismic retrofit codes are a special problem for those who live in seismically active areas. In California, for example, specifications are rigid enough to require that a building be able to survive disturbances strong enough to tip the structure over. Utah is also an active seismic area, and the State Building Board consulted with California engineers to prepare the renovated USHS structure for earthquakes. The seismic retrofit requirements cost nearly $500,000, a budget-breaker for all but the most carefully planned project.

The nature of Salt Lake City's water table even entered into our renovation plans. To store low-use materials, we proposed using a series of compactors in the basement. We discovered that basement storage was less than ideal because the water table in normal years was only about three feet below the basement floor. The threat of flooding forced us to provide a means to keep the basement dry.

The basement level has also created a problem with sewage discharge from the renovated depot. The outflow level is eight feet below the street, but the basement floor is ten feet below the street. We either have to pump sewage up into the sewer line or re-lay the line deeper in the street to properly serve restroom facilities in the basement and the rest of the building.

To deal with these details and with the overall planning, the archival administrator has to work with others. One of the most vexing problems encountered by groups renovating buildings is the task of finding an architect and a builder who will do the job right. As we met with the architect to communicate our needs, it was quickly apparent that his knowledge was general—that "archives" was a word he

would look up later in a dictionary. It took several meetings to explain our specifications for such features as environmental controls, door arrangements, and security. Even after repeated explanations, letters, and documents, we sometimes found that our suggestions were not incorporated in the planning. Space for storing records and other documents, for example, is defined as simple storage space and receives a low priority allocation from architects. After many discussions and meetings with Building Board staff, the architects, and our staff, we ended up with compromises that shattered some of our plans but left us with a workable, if not an ideal, facility.

Many other individuals will influence the renovation project, too. In one instance, we requested a wet stand pipe for fire protection to avoid accidental flooding of the stacks. The fire marshall, however, insisted on the installation of sprinklers throughout because the Utah fire protection code requires sprinklers in space used by people. We could not afford to use halogen gas, which poses less danger to archival material than does water. He also insisted that we remove a security door that divided the stacks from the public area, because two emergency exits were required for all areas and we had only one. Nor would he permit us to use the ten-foot-wide hallway for anything but access and exit, eliminating some storage space.

Escalating costs are often the reflection of changing plans, disputes with architects, and compromises with others, including those competing for available space in the building. As we were checking the specifications in final preparation for inviting bids on the work, we discovered that the architect had misplaced the list of environmental requirements we submitted during earlier meetings and had omitted any provisions in the environmental equipment for the extraordinary filters we had planned. We redrew the specifications list and telephoned throughout the country to obtain prices and information about equipment compatible with the plan. The cost of the equipment for the whole building with special filters for the library/archives will be over $600,000—a staggering amount, especially when compared to the $40,000 we spent in 1975 to replace the boiler in the Kearns mansion.

Seismic retrofit requirements costing $500,000 brought a total bid price that exceeded the estimated cost of renovation by $432,000. Building costs are rising about 18 percent annually in Salt Lake City, so delay eroded our purchasing power. To adjust to the projected cost overrun, we compromised further, eliminating third floor development and postponing the installation of cooling towers for the air conditioners. None of these changes, however, were so basic that we could not return later with more money to complete a first-rate facility in an historical building. More to the point, we gained 75,000 usable square feet in the move from the Kearns mansion to the Rio Grande Depot; that is the ultimate justification for the renovation, even though we will have to share that space with museum, archaeology, and preservation functions.

Our experience with the adaptive reuse of the old railway depot has yielded many valuable lessons. It reinforced the importance of planning and of knowing an archives's needs. We learned that plans will change and that it is impossible to anticipate every development. Obviously under these circumstances, flexibility is a key. I learned once again that as important as our library/manuscript collection is, we play a supportive role in the larger business of the historical society, a position held by many other archives as well. In a

specialized field such as archives, it is difficult to convince the individuals involved—from architect, to fire marshal, to administrator—of the validity of our special needs. Although our effort will not achieve an ideal facility, careful planning and sharp bargaining during plan-adjustment negotiations have provided a renovated structure suitable for an archival operation. It may not be perfect, but it will be a solid investment in the growth of archival service.

Waiting room of the Rio Grande Depot, 1910. Doors in the middle of the photograph now open to the USHS library. Photograph courtesy of USHS.