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Standards for Permanent Records Storage and Presidential Libraries

by Richard Judson
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On September 30, 1997, the Archivist of the United States sent to the President and to the Congress his Strategic Plan for the National Archives and Records Administration. Entitled "Ready Access to Essential Evidence," the strategic plan set several goals for the agency. I am here today to speak to you regarding progress made to date on one of these goals - goal three which established that "All records will be preserved in appropriate space for use as long as needed." Specifically, I will attempt to give you an overview of NARA's new standards for permanent records storage and for Presidential Libraries.

NARA has established as one of its regulatory priorities for fiscal year 1999 the issuance of updated regulations relating to the storage of inactive Federal records. The NARA regulations must provide other Federal agencies with the guidance they need to fulfill their statutory obligation to make and preserve records containing adequate and proper documentation of the agency's business. This is especially true as NARA's records center operations are converted to a totally reimbursable operation.

The current regulations as they are listed in the Code of Federal Regulations 36 CFR 1234 have not been revised since the early 1980's. They cite obsolete industry standards and, more importantly, they do not distinguish between the environmental storage conditions for temporary records and for permanently valuable records. Nor do the current standards reflect fire safety standard changes that have taken place since the early 1980's.

Last spring a small subcommittee was formed to review the current standards to determine what changes were required for various types of records.

Looking at the needs of both permanent and temporary records, the group decided that temporary records (and for the purposes of a definition of "temporary records" it was decided temporary records would be defined as records that required retention up to one hundred years) did not require the same storage requirements as permanent records. Permanent records were defined as archival records or records that might become archival records.

Working from the existing CFR standards, new draft standards were prepared for both temporary records and permanent records. Today, I will outline some of the changes incorporated into the new draft standards for permanent records.

The previous standards recommended that the records storage facility be limited to one story. More efficient use of space could be achieved with a multistory facility and it was determined that, if properly designed, the facility did not have to be limited to one story. Although we have required all new records storage facilities to be professionally designed by a team including a licensed fire protection engineer, the new draft standards emphasize that facilities with multiple stories must be designed by a licensed fire protection engineer to avoid catastrophic failure of the structure due to an uncontrolled fire on one of the intermediate floor levels.

Related to this, it was further determined that the roof must have a fire resistive rating of at least one half hour but not more than one hour.

Since the previous standards did not address the siting of a facility in areas that might be prone to natural disasters, the new draft standards have a provision that facilities containing records be located a minimum of five feet above and 100 feet away from any 100 year flood plain areas. Also added to the standards is a provision that facilities shall not be located in areas subject to other natural environmental impacts. Facilities that might be subjected to earthquake hazards, tornadoes, hurricanes and other potential natural disasters must be designed to prevent building collapse or the failure of essential building equipment.

To incorporate conservation concerns, a provision was included that building materials used in the construction of new facilities must be selected to prevent off-gassing into the storage areas.

A new provision was added that roads to records facilities, their fire lanes and parking areas permit unrestricted access for emergency vehicles.

References to Federal Specifications regarding the bracing of steel shelving have been replaced with requirements that the steel shelving be industrial style, shelving rated at a minimum 300 pounds per shelf, that they be adjustable and that they be finished with a powder coating system. All storage shelving must be designed and installed to provide adequate seismic bracing.

In addition to the revised requirements for shelving systems, provisions were added to permit the use of compact shelving as long as the shelving is designed to permit proper air circulation and fire protection.

To ensure adequate response to security and fire matters at the facilities, requirements were added to the standards that the intrusion alarm and the fire alarm systems be tied into a secure, dependable remote central monitoring facility staffed 24 hours per day meeting certification requirements of Underwriters Laboratory.

As to the security requirements for records facilities, it has been decided that those facilities must meet the requirements of a Level III facility as defined in the Department of Justice, US Marshals Service report entitled "Vulnerability Assessment of Federal Facilities" dated June 28, 1995. All security provisions outlined in the US Marshals Service report for Level III facilities must be incorporated into the facility design.

Due to problems associated with roof mounted equipment and the servicing of that equipment, our draft standards have prohibited mounting equipment on the roof of records storage facilities - although this may be relaxed during review to prohibit the roof mounted equipment over the stack areas only.

Similarly, having mechanical and electrical equipment in records storage areas present their own problems. Our draft standards require that no mechanical or electrical equipment be installed (whether floor mounted or suspended) in records storage areas. Further, except for fire protection sprinkler piping, we have restricted piping from records storage areas. There is a recognition that roof drainage piping may have to be routed through records storage areas. If this is the case, we have included a requirement that the drainage piping be run to the nearest vertical riser and that the horizontal piping have continuous guttering beneath it to reduce the possibility of leakage in the records storage area.

A new requirement to the standards is the requirement for Ultraviolet light protection within the storage, research and processing areas.

Due to the importance of certain electrically fed systems (such as the fire alarm, the fire protection, the security system and the HVAC systems), we have added a requirement for a second primary service feeder to insure continuous, dependable electrical service to the facility.

To prevent fumes from entering the facility from the loading dock area or parking areas, we have included a requirement for positive air pressure in the facility and we have prohibited air intake louvers in the loading dock and parking areas.

Several changes have been made to the requirements for fire protection systems. First, and probably most important, provisions have been added that fire protection systems must be designed by a licensed fire protection engineer. This, in connection with our requirement to limit loss of records to a maximum of 300 cubic feet in any single fire event, have led to a more prescriptive rather than a descriptive set of requirements. The standards do limit records storage areas to a total capacity between 200,000 and 240,000 cubic feet (an area of approximately 40,000 square feet).

NARA is still in the process of performing fire tests on different shelving configurations and the new standards are not intended to restrict the design to specific shelving arrangements. We do know from previous fire tests performed in connection with the design of the Archives II building and tests performed prior to the design of this facility, that certain shelving

arrangements and sprinkler configurations can limit records losses to 300 cubic feet. Alternate designs can be proposed but, prior to approval of the designs, independent testing of the design configurations overseen by either UL or Factory Mutual or an equivalent organization, have to be performed.

In the current CFR standards, the sprinkler heads are specified to be rated at 286 degrees Fahrenheit. To achieve the limits of records protection, the rating of the sprinkler heads has been reduced from the 286 degrees to 165 degrees Fahrenheit for all new facilities and the sprinkler heads have been specified to be quick response heads. NARA has determined that wet records can be preserved so it is worth the risk of setting the sprinkler heads off at a lower temperature rather than to take the chance of incurring greater loss with the higher rated sprinkler heads.

The greatest changes and the changes that most distinguish the storage requirements for temporary records from permanent records are in the environmental conditions. The current CFR standards merely state that "Archival materials, whether on paper, plastic, or other media, generally require a much higher level of protection than temporary records, such as environmentally controlled and filtered storage space, and other safety measures..."

While the records are still active and in the possession of the originating agency, the records will have to be stored in typical office environment. Once the records have been accessioned to NARA, NARA intends to store the records in conditions that have been established by our in-house conservation staff. These conditions include requirements that storage and processing areas not be serviced by HVAC systems that serve other areas of the facility. Any areas of the facility that might introduce gaseous or particulate contaminants into storage or processing areas are to be vented to the outside.

Based on more current research, our in-house conservators have determined that daily fluctuations in temperature have to be limited to +/- 5 degrees Fahrenheit and changes in relative humidity have to be limited to +/- 5 percent daily. The new standards recognize that there are safe "bands" of temperature and humidity ranges for preservation of different types of records. Based on recent research, our in-house conservators have determined that slight "seasonal drifts" in storage conditions are acceptable if they are gradual and remain within the overall temperature/humidity ranges for preservation. As such, the new standards permit a variation in relative humidity of +/- 5 percent per month while still staying within the 5 percent daily band variation. I won't go into the various temperature and humidity ranges other than to say that for textual records, the optimum temperature has been determined by our staff to be 65 degrees Fahrenheit and the ideal relative humidity range is 35 to 45 percent.

The new draft standards include filtration levels for pollutants and maximum permissible exposure limits. I won't go into these standards this morning especially since the standards are still under review within NARA.

Concerning the status of the Presidential Library standards, at the time the strategic plan was sent forward to the President, the facility standards for Presidential Libraries were well under way towards a long needed update. The standards that were in use up through the design for the George Bush Presidential Library were the Presidential Libraries Manual, referred to as 1401. These standards had been issued in mid-1985 with a last reprint in 1992 and dealt more with the operation of the Presidential Library than the construction of the facility.

Change 1 dated August 10, 1988 to the 1401 manual did incorporate many facility related standards. There are sections dealing with lighting, environmental conditions and space layout but the information provided doesn't contain a great deal of detail. For example, the environmental section merely listed the ideal temperature as being 70 degrees Fahrenheit and the ideal relative humidity level as being 45 percent. The standards did mention allowable fluctuations in the temperature and humidity as being +/- 5 degrees Fahrenheit and +/- 5 percent relative humidity. Seasonal fluctuations were also recognized in the standards but again, the fluctuations were allowed only if they were gradual. And, there is information provided regarding the filtration required for particulates.

The new draft Architectural and Design Standards for Presidential Libraries are much more detailed dealing with the layout and the construction of the facility. There are full sections covering the program requirements and the adjacencies within the Library and detailing the specific standards for the Library. Many of the standards are similar to those for centers containing permanent records. In fact, the new standards for records centers containing permanent records were designed taking information first developed in the new Presidential Library standards. The main purpose for the new Presidential Library Standards is really twofold. First, the Presidential Libraries Act of 1986 (Pub. L. 99-323; 44 U.S.C. Ch. 21) requires the Archivist to promulgate architectural and design standards for new Presidential libraries. Second, the new standards were intended to facilitate the review of library designs and to simplify the future maintenance in the new libraries.

The status of the new Presidential Library standards is that they have been sent out for public comment once with only a few responses received. They are now undergoing a second round of internal reviews with the hopes that the new standards will be ready for use in the design of the William Jefferson Clinton Presidential Library.

Richard Judson, Engineer, NARA Space and Security Management.

Prior to joining the NARA staff, Richard Judson worked 23 years with the General Services Administration, Design and Construction Division in the Washington, DC area. He is currently the project manager for the design of the new encasements for the Charters of Freedom documents.

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