

CHAPTER 1B-26.0021 RECORDS MANAGEMENT - STANDARDS AND REQUIREMENTS – MICROFILM STANDARDS

(1) Purpose. The purpose of this section is to provide standards for microfilming of public records to assure that the film, photographing methods, processing, handling, and storage is in accordance with methods, procedures, and specifications designed to protect and preserve such records on microfilm.

(2) Definitions. When used in this section the following terms and definitions apply:

(a) Permanent record – Any public record that has been determined by the Division of Library and Information Services to have sufficient historical or other value to warrant its continued preservation. Each record series shall be considered on an individual basis by the Division of Library and Information Services in making this decision. See Section 119.011(11), F.S., for a definition of a public record.

(b) Long-term record – Any record that has an established retention period of more than 10 years.

(c) Medium-term record – Any record that has an established retention period of less than 10 years.

(d) Original microfilm – Camera microfilm whether produced by conventional source document or Computer Output Microfilm (COM) methods, and regardless of emulsion or base.

(e) Silver original microfilm – Camera microfilm meeting the requirements of the American National Standards Institute (ANSI) standards:

1. ANSI/IT9.6 – American National Standard for photography (film) – safety photographic film.

2. ANSI/NAPM IT9.1 – American National Standard for photography (film) – archival records, silver-gelatin type, with a base of safety cellulose ester and polyester having silver-gelatin emulsion.

3. ANSI/IT9.10 – American National Standard for photography (film) – methods for determining curl.

4. ANSI/NAPM IT9.7 – American National Standard method for determining the brittleness of photographic films and papers.

American National Standards Institute (ANSI) standards may be obtained from the American National Standards Institute, Inc., 11 West 42nd Street, New York, N.Y. 10036.

(f) Duplicate microfilm – Second generation negative or positive microfilm meeting the requirements of American National Standards Institute (ANSI) standards ANSI/NAPM IT9.1 referenced in paragraph (e) above, or:

1. ANSI/IT9.5 – American National Standard for photography (film) – ammonia-processed diazo films – specifications for stability.

2. ANSI/IT9.12 – American National Standard for photography (film) – processed vesicular film – specifications for stability, whether produced from an original negative or from an original positive.

(3) Standards for microfilming permanent and long-term public records:

(a) Arrangement and reproduction, general – The integrity of the original records shall be maintained by insuring that the microfilmed copies are adequate substitutes for the original records and that they serve the purposes for which the original records were created or maintained. To insure this:

1. The microfilm copies shall contain all significant record data shown on the originals;

2. The records on microfilm shall be arranged, identified, and indexed so that an individual document or component of records can be located with reasonable facility;

3. The photographic densities on negative microfilm shall be at the lowest level commensurate with intended use. Where possible, the delta densities on negative copies shall be as follows:

a. Background densities on negative-appearing camera microfilm. Gross background densities from 0.80 to 1.50 in clear-base, negative appearing film are recommended depending on the type of original document and on the reduction. Groups 1 to 5 indicate the density range at which these documents likely can be microfilmed successfully.

(I) Group 1. High-quality, high contrast printed books, periodicals and black typing. Density of 1.3 to 1.50.

(II) Group 2. Fine line originals, black opaque pencil writing and documents with small, high-contrast printing. Density of 1.15 to 1.40.

(III) Group 3. Pencil and ink drawings, faded printing and very small printing, such as the footnotes at the bottom of a printed page. Density of 1.0 to 1.20.

(IV) Group 4. Low-contrast manuscripts and drawings; graph paper with pale, fine-colored lines; letters typed with a worn ribbon; and poorly printed, faint documents. Density of 0.80 to 1.0.

(V) Group 5. Although not a general practice, some poor-contrast documents may require a background density of 0.70 to 0.85.

b. The base-plus-fog density of unexposed, processed, clear-base film shall not exceed 0.10. When a tinted base film is used, the density will increase by 0.1 or 0.2, which must be added to the 0.10 value.

c. The ultimate density criteria are for the microfilm to be legible for its intended use, for example, reading, duplicating or printing hardcopies, and for all images in a roll to be duplicated at the same duplicator exposure.

4. Resolution requirements are dependent upon the reduction ratio being utilized. The following is the recommended minimum resolving power (line pairs per mm.) for each reduction ratio:

Reduction Ratio	Resolving Power (Lines pairs per mm.)
8:1	80
12:1	108
15:1	106
16:1	114
17:1	107
20:1	112
21.2:1	119
24:1	120
28:1	126
30:1	135
33.9:1	136
36:1	144
42.4:1	136
48:1	134

(b) Roll microfilm identification and arrangement.

1. The photographic images at the beginning of each roll of microfilm shall include:

- Information identifying the agency and organization to which the records relate,
- The title of the records,
- The microfilm roll number,
- The inclusive dates, names, or other data identifying the first and last records on the roll, and
- Any indexes, registers, or other finding aids for the records on the roll.

2. If the microfilm is to be used in evidence, appropriate certifications are required at the beginning and end of each roll.

(c) Unit microfilm arrangement – microfilm systems employing unit microforms jackets, fiche, etc. shall be so designed that:

- The resulting microfilm file is an accurate representation of the original records, and
- Any indexes, registers, or other finding aids essential to the operation of the system are microfilmed and located in a readily identifiable place with a collection of microfilmed records.

(d) Applicability of standards to Computer Output Microfilm – Computer Output Microfilm (COM) systems, which produce original permanent and long term records on microfilm with no paper originals shall be designed so that the resulting microfilm product meets applicable standards set forth in this section.

(e) Microfilm stock – permanent and long term records. The film used to make the original microfilm copies of permanent records shall be safety-base permanent records film specified by the American National Standards Institute (ANSI) Standards set forth in paragraph (2)(e). The film used to make the original microfilm copies of long term records shall be safety-base permanent record film specified by the American National Standards Institute (ANSI) Standards set forth in paragraph (2)(e), unless a security duplicate is made in accordance with ANSI Standard IT9.5, Ammonia Processed Diazo Films or IT9.12, Processed Vesicular Film, paragraph (2)(f), and stored in accordance with paragraph (2)(i), permanent and long-term storage standards.

(f) Film processing – film used for microphotographic copies of permanent records shall be processed so that the residual thiosulfate concentration will not exceed 0.14 micrograms per square centimeter. The test used for determining the concentration of residual thiosulfate on processed film shall be those specified in American National Standards Institute (ANSI) standard IT9.17, Standard for

Photography (Chemicals) – Residual Thiosulfate and Other Chemicals in Films, Plates, and Papers – Determination and Measurement.

(g) Microfilm use criteria – the following criteria shall be observed in using microfilm of permanent records:

1. Original microfilm of permanent and long term records shall not be used for reference purposes. Negative or positive duplicates, such as silver, vesicular, or diazo of the original negatives shall be provided for reference use.

2. Adequate measures shall be taken to keep the original microfilm clean and unscratched.

(h) Standards for reels and containers – the following standards are to be observed in packaging silver original microfilm copies of permanent and long term records. The standards shall also be applied to silver duplicate microfilm to assure maximum protection against deterioration:

1. Microfilm stored in roll form shall be wound on cores or on reels of a type specified by American National Standards Institute (ANSI) standard MS34, Standard for dimensions for 100-foot Reels for Processed 16mm and 35mm Microfilm. The materials used for the cores and reels shall be non-corroding such as plastic compounds or non-ferrous metals. Steel reels shall be used only if the reels are well protected by lacquer, enamel, tinning, or other corrosion-resistant finish. Plastics and lacquer that might give off reactive fumes or exudations during storage shall not be used. If plastic materials are used, they shall be free of peroxides.

2. Paper strips which have not been deacidified or rubber bands shall not be used for confining film on reels or cores. No materials are to be used that shall ignite, decompose, or develop reactive fumes and vapors.

3. Closed containers made of inert materials such as metal or plastic of proven quality shall be used. The container shall be sealed where needed to maintain prescribed humidity limits or to protect film against gases and impurities. If the temperature and humidity controls are maintained as prescribed in subparagraph (i)2. below, and if there is good ventilation in the storage area, the containers need not be sealed. Open containers, such as acid-free boxes or folding cartons, may be used only if it has been determined by the manufacturer that the container material is acid free and will have no adverse effect on the film over long periods of time.

(i) Permanent and long-term storage standards – The following standards are applicable to the storage of microfilm copies of permanent and long-term records:

1. The microfilm is to be kept in a fire resistant vault or room. The storage area is not to be used as an office or working area. No flammable materials shall be stored in the storage area. For full protection against exposure to fire and associated hazards, fire resistive safes or insulated containers shall be placed within fire resistive vaults or rooms constructed in accordance with recommendations of the National Fire Protection Association standard NFPA 232. A copy of the standard may be obtained by writing to NFPA, 1 Batterymarch Park, P. O. Box 9101, Quincy, Ma. 02269-9101.

2. The relative humidity and temperature of the storage vault or room shall be maintained at a constant level. Optimum levels are below 21 Celsius for temperature and between 20% and 50% for humidity according to ANSI/NAPM IT9.11, 1993. Rapid cycling and wide ranges of humidity or temperature shall be avoided and shall in no instance exceed plus or minus 5 percent humidity or plus or minus 5 degrees F. temperature in a 24-hour period. Where inactivity of the film permits, protection may be increased by conditioning and sealing the film at a lower temperature. Moreover, a lower temperature can compensate for a higher humidity, but the maximum humidity shall not exceed 50%. Film stored at humidities below 20 percent and temperatures below 21 degrees Celsius shall be sufficiently warmed and reconditioned before using to avoid damage in handling.

3. Air conditioning shall be kept under sufficient control to meet the standards for temperature and humidity as specified in 2. above. Dehumidifiers employing inert desiccants may be used provided the humidifier is equipped with filters capable of removing dust particles down to 0.3 micrograms per square centimeter in size and is controlled to maintain the relative humidity. Water trays or saturated chemical solutions shall not be used to increase the humidity level because there is serious danger of over humidification.

4. Silver-gelatin microfilm shall not be stored with other types of film in the same room or in rooms connected by ventilating ducts because gases given off by the non-silver gelatin microfilm may damage or destroy the safety-film base.

(j) Microfilm inspection – a number of different representative samples of film shall be inspected at 2 year intervals. If deviation from recommended temperature and humidity has occurred, inspection shall

be made at 1 year intervals. For each biennial inspection, a different lot sample shall be chosen, allowing some overlapping of inspection to note any changes in previously inspected samples. Guidelines as set forth in the National Bureau of Standards Handbook 96, Inspection of Processed Photographic Record Films for Aging Blemishes shall be followed. If such inspections indicate the presence of blemishes, the Division of Library and Information Services, Department of State, the Capitol, Tallahassee, Florida 32399-0250 shall be notified within 30 days after the inspection is completed. Reports shall include the minimum of the following information:

1. Quantity of microfilm of permanent records on hand, that is, the number of rolls, microfiche, jackets, etc.,

2. Quantity of microfilm inspected,

3. Condition of the microfilm,

4. Corrective action required.

- (4) Standards for filming medium-term public records.

- (a) Records with a medium-term retention period of less than 10 years – Records to be retained less than 10 years may be microfilmed in accordance with agency standards and requirements for the retention of the records, including the option of using any film, processing system, or storage containers the agency may select.

- (b) Storage standards for medium-term microfilm – Temperature and humidity of medium-term storage areas shall be maintained in accordance with American National Standards Institute (ANSI) standard NAPM IT9.11. Walls and enclosures shall be so designed to prevent moisture from condensing on surfaces when exterior temperatures are below the dew point. Inspection and viewing of medium-term film may be done in the same area – separate work and storage areas need not be maintained, but good housekeeping practices shall be followed. Separate storage rooms shall be maintained for films that release acid fumes.

- (c) Cost benefit analysis – Before records with a retention period of less than 10 years are committed to microfilm, a cost benefit analysis shall be prepared to insure that the project or system contemplated is cost effective.

Specific Authority 257.14, 257.36(7) FS. Law Implemented 257.36(1) FS. History–New 12-22-86, Amended 2-7-96.