

STANDARDS FOR MICROFILMING COUNTY RECORDS

1. Authority

The standards were adopted by the County Records Committee in accordance with the County Records Act (16 P.S. 13001-13006).

2. Purpose

The standards are designed to help ensure the accuracy, usability, longevity and legal acceptance of microforms generated by county offices.

3. Scope

The standards relate to the filming, processing, inspection, handling and storage of microform copies, of records created by county offices covered by the County Records Act and Rule of Judicial Administration Pa. R.J.A. No. 507 (a). They must be included as part of the requirements in all microfilm service contracts. With minor exceptions, these standards are in strict conformance with American National Standards Institute (ANSI) and Association for Information and Image Management (AIIM) standards and practices. Raster Output Microforms are covered by the standards. Color films are not covered by the standards.

4. General Provisions

When a microform copy is to serve as or in place of the original record or is to serve as a security copy of the original record, the following general standards shall apply:

4.1 Microimages, including the generation intended for use by office staff or the general public, shall contain all of the recorded information shown on the originals and shall be able to serve the purpose for which the original records were created or maintained. Microimages shall be free of obstructions, shadows or glare which impair the legibility of a document.

4.2 Microimages of the records shall be arranged, identified and indexed so that any individual document or component of the records can be located with reasonable ease.

5. Creation of Archival Security Microfilm Copies of Permanent Records

5.1 All county records custodians engaged in, or contracting for, the microfilming of permanent records shall provide for the creation of an archival security microfilm copy of such records.

5.2 Permanent records are those records which have been scheduled for permanent retention either in the original or microfilm copy by the County Records Committee or by applicable statute and regulation.

5.3 An archival security microfilm copy is a copy which is created, used, inspected and stored in conformance with standards for archival security microfilm.

5.4. The original camera film (Master Negative) of records scheduled for permanent retention shall never be used for reference purposes and should normally be designated as the archival security microfilm copy. Silver-gelatin duplicate negatives or silver-gelatin duplicate positives that meet appropriate standards may serve as the security copy if necessary. If the original camera film is to be jacketed or cut for aperture cards, an uncut duplicate roll of silver halide film that meets the appropriate standards for security film shall be made and designated as the official security copy. Records custodians employing systems that do not produce an original silver-gelatin microfilm which meets permanency standards shall make a silver-gelatin duplicate negative or silver-gelatin duplicate positive which does meet these standards.

6. Film Stock, Processing and Quality Standards for Archival Security Microfilm Copies of Permanent Records

6.1 Film Stock Safety Photographic film as specified in ANSI/NAPM IT9.1-1992 and ANSI IT9.6 1991.

6.2 Density. Background densities of negative-appearing archival security microfilm copies shall, where possible, be between .9 and 1.2.

In certain instances, some poor-contrast documents may require lower densities in order to make the entire image legible and reproducible as mentioned in ANSI/AIIM MS23-1991. Densities of raster COM microforms should be adequate and uniform; all information must be reproduced accurately and completely so that its use will not be impaired. Raster COM microforms must meet all appropriate density standards. Background density on positive appearing negative camera film shall not exceed 0.35. The density of silver duplicate positives designated as the security copy shall be between 0.04 and 0.20 where possible. Background density of Computer Output Silver Gelatin (1N) Microfilm (full reversal processing) shall, where possible, be between 1.5-1.8 (1.8 preferred).

6.3 Base-plus-Fog Density. The base-plus-fog density of unexposed, processed, clear-based film shall not exceed 0.10. When a tinted-base film is used, the density will increase by 0.10 or 0.20 which must be added to the 0.10 value. The use of tinted, high fog base films is not recommended.

6.4 Resolution. A minimum resolution of 90 lines per millimeter shall be obtained regardless of reduction ratio used or the type of camera used, and the 4.0 pattern shall be resolved. In cases where raster COM microforms are reproduced, measurement of resolution and quality of raster COM film is determined in dots per inch. Raster COM microforms must meet all appropriate resolution standards. A paper print made from the third generation microfilm copy should be able to serve the same purpose for which the original records were created.

6.5 Residual Thiosulfate. Residual Thiosulfate ion concentration must be greater than zero but shall not exceed 0.014 grams per square meter in a clear area in accordance with ANSI/NAPM IT9.1-1992.

7. Identification, Technical, and Declaratory Targets for Roll Microfilm (See Appendix III)

7.1 All roll microfilm shall include targets which adequately identify the records and targets needed to check for compliance with resolution requirements. A blank, white sheet of paper shall be photographed at the beginning of each roll to

test the uniformity of the illumination and the cleanliness of the camera's optical system. Resolution test targets shall be filmed near the beginning and end of each roll. Targets used shall be either the NIST SRM 1010A Microcopy Resolution Test Chart or an equivalent for planetary cameras such as the AIIM X303 test chart and the AIIM X112 (plastic target) or AIIM X113 (paper target) or their equivalents for rotary cameras. Do not use photostatic or electrostatic copies of resolution charts. Identification targets shall state the name of the county and office; name and title of the records custodian responsible for the records at the time of filming; reduction ratio; and record series title, dates, and such volumes or serial numbers needed to clearly identify the records. Each roll shall end with a declaration by the camera operator. The declaration shall include the operator's signature, date the declaration was filmed, and restatement of records filmed.

Retakes and retake targets should normally be spliced onto the beginning of the roll in which the errors occurred, preceding the start target. The use of intelligent/blip encoded microfilm may necessitate the use of different retake procedures.

7.2 Filming sequence should be:

- 1) blank white sheet of paper
- 2) start target
- 3) roll number target
- 4) resolution test target
- 5) reduction ratio target
- 6) agency and record series identification target(s)
- 7) if applicable, "continued from preceding roll" target--instances where volume is filmed on more than one roll
- 8) the text
- 9) if end of book, film "end of volume" target-if not end of volume, but end of roll coming, film "continued on next roll" target
- 10) if end of roll, film the declaration by the camera operator, the resolution target, and the "end of roll" target
- 11) raster COM microforms should also contain a target stating the name of the conversion vendor; and a target indicating the dots inch (dpi) at which the conversion was done, in addition to proper identification targets (no resolution or scanner target should be overlaid on the microform)

8. Splices

Splicing of archival security microfilm rolls should be avoided, but if splicing is necessary, care should be taken to keep the number of splices to a maximum four per roll. Ultrasonic splicing meets standards for polyester base film.

9. Quality Control Practices and Procedures

9.1 Procedures to be followed in establishing and operating a microfilm program should conform to appropriate recommendations contained in ANSI/AIIM MS23-1991 Practice for Operational Procedures/Inspection and Quality Control of First-generation, Silver Microfilm of Documents. Each camera negative shall be checked for proper identification targets, density, resolution and visual defects.

9.2 The ability of archival security microfilm copies of permanent records to serve as a substitute for the original records shall be adequately confirmed and documented. Quality control logs for such film shall be maintained to document adherence to standards (see Appendix IV). At a minimum, such logs should verify the following:

9.2.1 The images are legible and can serve the purposes for which the original records were created or maintained.

9.2.2 Roll film contains all required identification, technical and declaratory targets.

9.2.3 Density readings were taken on a blank white sheet of paper at the beginning of the roll, and, at a minimum, on the background of document images at the beginning, middle, and end of each roll.

9.2.4 A Base-plus-Fog Density Reading (D_{min}) for each roll.

9.2.5 The number of the pattern resolved from a reading of the resolution test chart and the reduction ratio on each roll.

9.2.6 Methylene Blue tests are being done on a regular basis. Testing should be done by an outside laboratory at a minimum on a monthly

basis. Appropriate sample strips must be inspected within fourteen days after processing.

Certificates from the laboratory, documenting that the microfilm passed the methylene blue test, should be maintained along with the logs. The certificates should include the name of the agency whose film was processed, processing date, date of methylene blue test, test results, processor used and the signature of the person who did the test.

10. Formats and Headings for Unitized Microfilm Systems (aperture cards, microfiche and jacketed film)

Unitized microfilm systems records should be designed and administered so that the resulting microfilm file is an accurate representation of the original records. Any indexes, registers, or other finding aids should be microfilmed and located in a readily identifiable place within the collection of microfilmed records. Formats for microfiche should conform to ANSI/AIIM MS5-1992. The data on heading or title areas on all microforms should be legible without magnification. The data should conform to ANSI/AIIM MS19-1993.

11. Computer Output Silver Gelatin (1N) Microfilm Procedures

COM programs should conform to standards set down in ANSI/AIIM MS1-1988. Density of Computer-Output Microfilm should be between 1.5 and 1.8 (Full Reversal).

12. Storage Conditions for Archival Security Microfilm Copies of Permanent Records

The security copy shall be stored and inspected in conformance with ANSI IT9.11-1991, ANSI IT9.2-1991 and ANSI/AIIM MS45-1990.

12.1 Temperature/humidity shall not exceed 70 degrees/40 percent. Fluctuations shall not exceed 5 degrees/5 percent over a 24-hour period.

12.2 Air-conditioning with filtration system shall be utilized to remove gaseous impurities.

12.3 Facility shall provide protection from fire,

theft and natural disaster.

12.4 The security microfilm copy shall be maintained in a separate building from the user copy.

12.5 Film shall be stored in closed containers made of an inert material such as plastic, acid-free paper, or nonferrous metals. Cores or reels shall be noncorroding such as plastic compounds or nonferrous metals. Rubber bands shall not be used to fasten film onto reels or cores.

12.6 Security copy shall not be stored with non-silver film.

12.7 As appropriate, a sampling of randomly selected microforms shall be inspected in conformance with ANSI/AIIM MS45-1990. For each inspection period, a different lot shall be chosen allowing some overlap to note changes in previously inspected film.

13. Security Copies of Vital and Long-Term Records

13.1 The security microfilm copy of long-term records shall be created and stored in conformance with standards for archival security microfilm copies of permanent records. The following sections are applicable to long-term records: Sections 4, 5, 6, 7, 8, 9.1, 10, 11, and 12.

13.2 Long-term records are any records that need to be maintained for more than ten years either in the original or microfilm copy. Security microfilm copies of vital records should be stored where appropriate in conformance with standards for long-term and permanent records. All security microfilm copies of vital records, regardless of retention periods, should be stored in a separate building from the user copy.

14. Short-Term Records

14.1 Short-term records are defined as records that require retention for ten years or less as indicated in the County Records Manual. Silver halide or other films are acceptable as the camera film. Film shall be processed in accordance with applicable ANSI/AIIM standards for their particular film types. The following sections are applicable to short-term records: Sections 4, 6.2, 6.3, 6.4, 7, and 9.1.

15. Reference Copies of Microforms

The standards relating to the film stock, processing, use and storage of archival security microfilm copies of permanent records do not apply to reference, user or additional duplicate copies. These copies may be on film types other than silver-halide, safety base film and should be processed in accordance with applicable ANSI/AIIM standards for their particular film types.

For additional information, contact:

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