

# Editing and splicing roll microfilm of long-term or archival value

South Carolina Department  
of Archives and History  
**Archives and Records  
Management Division**

## **Introduction**

To ensure the longevity, durability, and legal integrity of information on roll microfilm of records of long-term or archival value, the Department of Archives and History has set out standards for its production. These standards cover retakes—the correction of errors by editing, re-filming, and splicing—a common practice in the field of micrographics. You can find the requirements and restrictions concerning the standards in the *South Carolina Code of Laws*, 1988 Cumulative Supplement, Regulation 12-202, and additional information on splicing in the ANSI/AIIM MS18 standard, “Splices for Image Film—Dimensions and Operational Constraints,” and ANSI/AIIM MS42, “Recommended Practice for the Expungement, Deletion, Correction or Amendment of Records on Microforms.”

This leaflet explains the editing and splicing procedures you must follow to ensure your retakes meet standards.

## **General information**

Splicing corrections into a roll of film entails cutting—an action that can weaken an improperly spliced roll and cause numerous difficulties if that roll is then reproduced or used on a reader or a reader-printer. To avoid these problems, the Department’s standards place restrictions on the number of



splices that can be made on a roll, the distance between splices, and the type of splices that are used. In addition, to protect the integrity of the information in the retake should questions of legality arise, the standards also require the certification of corrections.

### ***Reasons for splicing***

- To correct errors that are detected after a roll of film is developed.
- To bring the documents in one file together when that file has been broken because some of the documents are filmed at the end of one roll and the rest have to be filmed at the beginning of another because the first roll ran out of film.

### ***Alternatives to splicing***

- You can avoid cutting and splicing if your camera operators detect the errors as they are filming the documents, film a Correction Sheet, and then refilm the documents immediately after the Sheet.
- You can also avoid cutting and splicing if you create an index to locate documents in files that have been broken because some documents were filmed at the end of one roll and the rest at the beginning of another.

### ***Number and spacing of splices***

You will splice retakes into your roll of film to replace the errors you cut out. To keep your spliced rolls strong and to allow for the possibility of torn splices, keep in mind both distances and numbers when you are shooting those retakes. To conform to standards, you should make no more than eight splices in a roll, and you should keep those splices at least four inches apart. You should also refilm at least five frames—the document on the frame to be corrected and the documents on the two frames preceding and succeeding it.

### ***Certification***

You must shoot a Certificate of Correction ahead of each retake you make. The Certificate attests to the authority of the camera operator who shoots the retake and to the fact that the records being refilmed belong with the file they will be spliced into. For more information on the use and place-

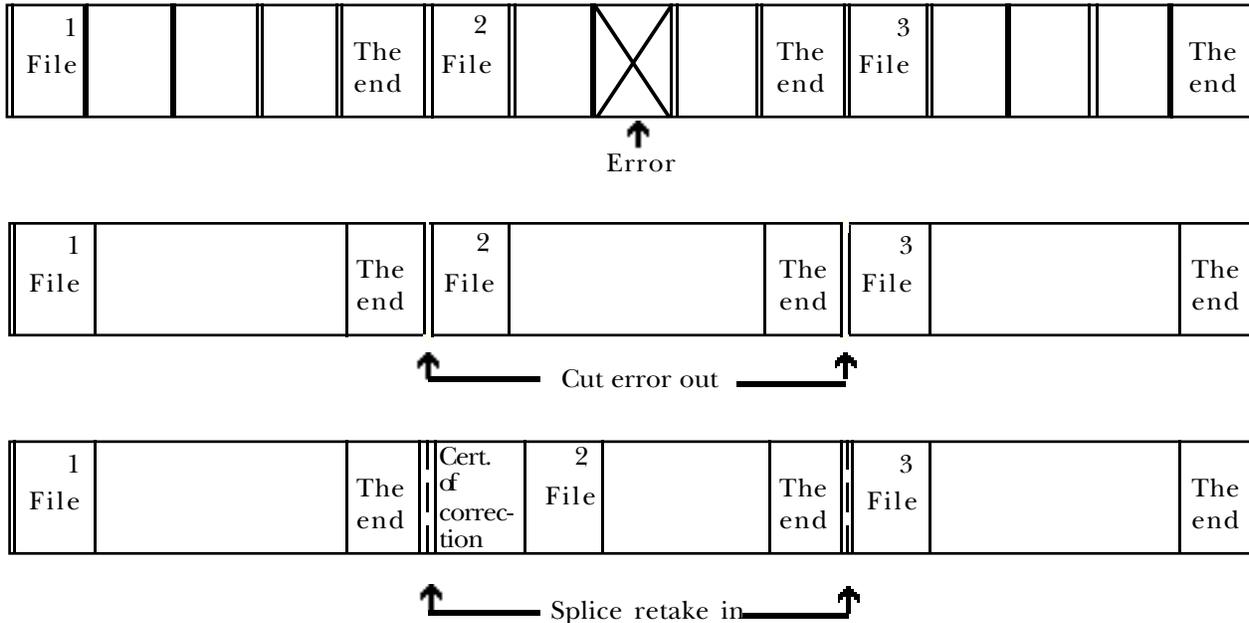


ment of Certificates of Correction and other certificates, see Public records information leaflet no. 4, *Targeting and Certification of Microfilm*.

**Editing** You can refilm and splice by editing your roll in several ways:

**Between files** If the file in which the error occurs is small, film the Certificate of Correction then refilm the entire file. To splice, remove the file with the error and insert the retake in its place.

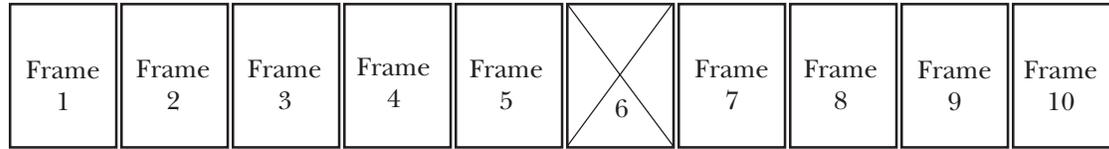
**Example of splicing between files**



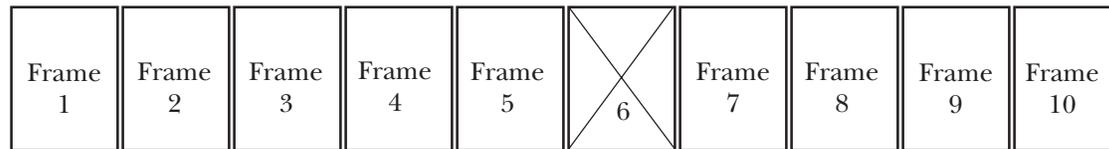
**Within a file** If the file in which the error occurs is too large to refilm, film a Certificate of Correction followed by both the document that needs correcting and the documents on the two frames preceding and succeeding it—filming the documents on at least two frames before and after the error will give you enough room to make your splices and will leave room to re-splice should the first splice ever fail. When you splice, cut out only the error, leaving the documents preceding and following intact.



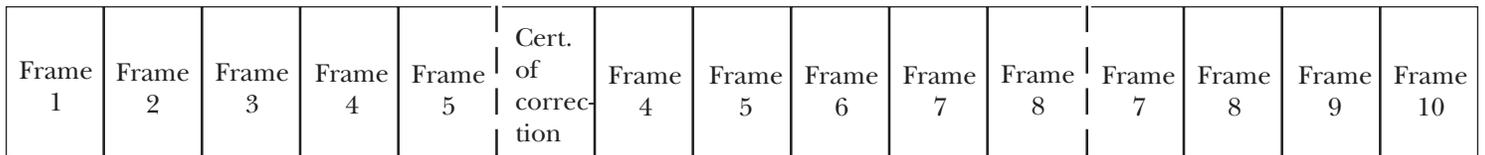
**Example of splicing within a file**



Error



↑  
Cut error out



↑  
Splice retake in

***At the end of a file***

Film a Certificate of Correction and then refile both the document that needs correcting and the documents on the two frames preceding and succeeding it. To splice, insert the retake between the end of the file from which the retakes were shot and the beginning of the next file. If you splice this way, you must identify the retake by noting the correction on the outside of the container holding your film.

***At the beginning of a roll***

If you have a number of corrections from various files, you can film them together, preceding each correction with its own Certificate of Correction and splicing the retakes onto the beginning of the roll before the Roll Number. When you refile and splice this way, you must make a note of each correction on the outside of the container holding your film.

***Joining documents from broken files***

If you are going to have to make a splice to bring the documents in one file together because you will be filming some at the end of one roll and the rest at the beginning of another, film a Certificate of Continuance before the documents that will follow the splice.



**Splicing** To protect your film when you splice, you should:

- Wear clean, lint-free, cotton gloves and avoid scratching or tearing it when you move it to and from the splicing equipment.
- Not splice different types of film together—polyester to acetate, 4 mil to 5 mil, or originals to duplicates, for example.
- Make sure the images on the pieces you are splicing run in the same direction.
- Don't cut too close to an image—leave room for a second splice in case the first breaks.

**Acceptable methods** Two methods—the **heat splice** and the **ultrasonic**—are the only ones that are acceptable for splicing camera negatives and duplicate security microfilm of records of archival or long-term value. Generally, heat splicing is used to splice acetate film and ultrasonic to splice polyester.

**Heat splicing:** uses heat and a bonding agent (a plasticizer) to fuse two pieces of film together and is designed for acetate or polyester-based film. The heat splicer has temperature and time settings for various types of film; these settings are set and periodically adjusted by the operator and are critical to the strength of the splice. Too much can weaken the bond by making the film brittle. Too little, and the film will not bond at all. The operator's manual will tell you how to operate and maintain the heat splicer. Look at it before you begin, and make a test splice on some other film before you splice your security roll. After you make the splice, remove excess plasticizer with a clean, lint-free cotton cloth.

**Ultrasonic splicing:** is the latest development in splicing. It is designed for polyester film only and uses high frequency sound waves to fuse two pieces of film together. It has factory settings and will need little maintenance aside from the replacement of the cutting blades. The operator's manual has instructions on how to operate and maintain the ultrasonic splicer. Look at it before you begin.



### **Unacceptable methods**

Splicing with pressure-sensitive tape or cement is unacceptable for film of archival or long-term value because the splices will deteriorate, and the chemical composition of the adhesives may damage the film. *Film spliced this way can not be stored in a vault holding other film of archival or long-term value.*

You can, however, use these methods, either alone or in conjunction with heat or ultrasonic splices, to splice your working copies—your film of short-term (less than ten years) value.

**Tape splicing:** is unacceptable first, because as it deteriorates its backing moves away from the spliced area and exposes residual adhesives, which stick to the next wrap of film and destroy images—and thus information. Secondly, as the tape deteriorates, the splice will weaken and will eventually separate. If separation occurs during duplication, the roll of microfilm could be seriously damaged and information lost.

**Cement splicing:** has been largely replaced by heat, ultrasonic, and tape splicing, although some older rolls probably still carry cement splices. Cement is unacceptable, however, first, because if it is not quite dry when the roll is rewound, it will stick to the next wrap of film, damage the emulsion, and destroy the image; and secondly, because it breaks as it deteriorates.

### **For more information**

This leaflet is one of a series issued by the Archives and Records Management Division, which has statutory responsibility for advising government officials on micrographics. The Division also issues publications and gives advice and help on records management and archival administration. For more information please contact: South Carolina Department of Archives and History, Archives and Records Management Division, State Record Center, 1919 Blanding Street, Columbia, SC 29201 (803) 734-7914. ■

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**Public information  
leaflets from  
the Archives**

- no. 1 *Legal requirements for microfilming public records (1992)*
- no. 2 *On choosing records for microfilming (1992)*
- no. 3 *Service bureau or in-house microfilming (1992)*
- no. 4 *Targeting and certification of microfilm (1996 revised)*
- no. 5 *Choosing a microfilm camera (1992)*
- no. 6 *Quality testing of microfilm (1992)*
- no. 7 *Microfilm and microforms (1992)*
- no. 8 *Choosing a micrographics service bureau (1992)*
- no. 9 *Choosing microfilm readers and reader/printers (1992)*
- no. 10 *Computer assisted retrieval systems (1992)*
- no. 11 *Microfilm storage (1992)*
- no. 12 *Preservation microfilming (1992)*
- no. 13 *Optical Disk: policy statement and recommended practices (1996 revised)*
- no. 14 *Storing records in the State Records Center (1993)*
- no. 15 *The deposit of security microfilm (1993)*
- no. 16 *Disaster preparedness and recovery in state and local government records offices (1993)*
- no. 17 *How to conduct a records inventory (1993)*
- no. 18 *How to establish records retention schedules (1993)*
- no. 19 *Photographic media (to be announced)*
- no. 20 *Editing and splicing roll microfilm of long-term or archival value (1994)*
- no. 21 *Managing E-Mail (to be announced)*
- no. 22 *Standards for microfilm service bureau certification (1996)*

