



Conserve O Gram

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Preservation Reformatting: Inspection Of Copy Photographs

Photographs, including negatives, prints, slides, and transparencies, are perhaps the most widely used archival materials. Yet their fragility places them at risk. When you successfully undertake preservation reformatting (duplication) you will preserve original photographs from destruction while increasing the accessibility of their information. The process of selecting materials for copying is described in *Conserve O Gram* 19/10, Reformatting for Preservation and Access: Prioritizing Materials for Duplication, while the process of selecting a copy technology is described in *Conserve O Gram* 19/11, Preservation Reformatting: Selecting A Copy Technology. Preparing photographs for duplication is described in *Conserve O Gram* 19/12, Contracting for Reformatting of Photographs. Perhaps the most challenging portion of reformatting occurs after copying: the inspection of the returned photographic copies to ensure their quality.

Inspecting Interpositives, Copy Negatives, Prints and Slides

All interpositives, negatives, prints, and slides produced either internally or by an outside photographic studio **must be carefully inspected by someone experienced in reading negatives.** In general, even the best photographic labs must reshoot between 5 and 10% of the copy negatives as their copies are discovered to be unsatisfactory. A 15% reshoot rate is not unusual. If the images are not inspected, these unsatisfactory copies will clog park files without providing useful information.

Inspection is a matter of experience and a trained eye. The curator should work with a photographer who is experienced in darkroom

work (other than the photographer or firm who did the copy work) to inspect the returned materials. Deteriorating photographs are very difficult to inspect. Compromises must be made between copy image sharpness and completeness.

Preparing the Work Space

Before beginning the inspection, set up an inspection work station. Materials you will need include:

- Clean, padded (white cotton sheet or clean white paper) worktable
- Light box with a well-balanced light source
- White, lint-free cotton gloves
- Pad of writing paper and a pencil
- Working copy of the original outgoing loan agreement (NPS 10-127 Rev) with the attached list of objects (NPS 10-417) or equivalent
- Archival enclosures, folders, and boxes for housing the inspected items

Beginning the Inspection Process

Always wear gloves while working with the photographs. First, count the returned originals and the copies. Does the total match the number of items listed on the loan form? Has the original order of the materials as reflected in the list of objects been rearranged? If so, you must reestablish this order for both the original and the copies. Check to ensure that each item loaned for duplication has been returned and that

appropriate copies were produced for each shipped item as requested.

If copies or original items are found to be missing they must be marked on the list of objects attachment to the outgoing loan. (See *Conserve O Gram*, 19/12, Contracting for Reformatting of Photographs and NPS *Museum Handbook*, Part II, Chapter 5, Outgoing Loans for more information.) Mark missing items next to the negative number with an **M** (missing) to indicate that the item was not duplicated and that the original negative was not returned. Use an **N** (not copied) to indicate that the copy was not made, but the original image was returned. You may use different colored pencils for the **M** and **N**, if you find color coding useful.

Once you have determined whether all images are returned or not, you may either inspect every image or a percentage of the items. If, for example, you inspect 20% and discover that a significant portion of the images (25% or more) is unacceptable you must go back and inspect every item or you will find yourself paying for unacceptable work. For example, if a collection copied includes 100 images of which 20 are inspected, and more than 5 are unacceptable, then inspect them all.

Set the original image next to any copies of the original on the light box. Place the list of objects on one side so it can be easily seen. Look over both images carefully. Compare them first overall, then image section by image section looking at the criteria listed below. As determinations are made mark them on the copy of the object list in code.

Naked-Eye Exam

- *Review the completeness of the visual information.* Allow no cropping or abbreviating of the image. Mark an **A** on the object list to indicate an abbreviated image.

- *Ensure that the copies are not reversed.* Mark an **R** on the object list to indicate reversed images.
- *Determine that the copies are not over or underexposed.* It is essential that the lightest tones (highlights), middle tones, and dark (shadow) tones all match the original and contain appropriate details. Mark an **O** on the object list to indicate those items that are overexposed (too light) or a **U** to indicate underexposed (too dark).
- *Ensure that the image scale of tones and contrast are equivalent to that of the original.* The difference between the darkest area and the lightest is the print's overall contrast. Local contrast must be discerned by studying individual areas for the range of tones and visual detail. The copy's levels of contrast overall and in specific areas should match the original. Mark a **C** on the object list to indicate contrast problems.
- *Ensure that the copies are not distorted or keystoneed* (i.e., compressed at top and expanded at their bottom). Mark a **K** on the object list to indicate keystoneed.
- *Check for physical flaws in the copy image* such as spots, stains, emulsion holes, and similar blemishes. Mark an **H** on the object list to indicate holes and an **S** to indicate spots or stains.
- *Make certain that the copy image has not been changed* by retouching or other photographic darkroom work that changes the appearance of the image from that of the original. Mark an **I** on the object list to identify images that have been changed.

Magnifying Glass Exam

Ensure that the image focus or sharpness is good. The image should not be soft focus or

grainy if the original negative or print focus or sharpness is good. Use a 30X magnifying glass to compare the copy to the original. Mark an **F** on the object list to indicate focus problems.

Professional Laboratory Test

Check a random percentage (5-10%) of the copies via another professional laboratory to ensure that the copies do not have unacceptable levels of residual processing chemicals. This will be accomplished through a contract with an outside laboratory (ask your state archives for a reference). Mark items that were tested with a **T** for test and either a plus (+) or a minus (-) to indicate passing or failing.

Recording the Inspection Results

After the inspection, mark all items that are not listed as rejected on the loan list of objects with a **P** to indicate that they passed the inspection. At the end of this process each item on the loan form should be coded as necessary to indicate what items did and did not pass inspection. A code key should be filed in the project file with the outgoing loan form.

Example

Attachment to Outgoing Loan Agreement No. 6

10 Negatives from box 1, folders 1-10 of the Magdalene Marmoset Collection:
Accession GIGL-14; catalog numbers GIGL 1 through GIGL 20.

Negative No.:

- 1 **U** (underexposed)
- 2 Original torn; **O** (overexposed) **T-** (failed inspection)
- 4 **M** (missing, not duplicated, negative not returned)
- 8 **A** (abbreviated inappropriately, information lost)
- 9 Original lacks negative number; **F** (focus/resolution problem)
- 14 **R** (copy image reversed) **T-** (failed inspection)
- 15 Watch for details in shadows of woman's skirt; **S** (stains or spots on image)
- 16 **H** (emulsion holes on copy image)
- 17 **N** (not copied, skipped, original returned)
- 20 **P** (image was copied acceptably) **T+** (passed inspection)

NOTE: Negatives numbered 3, 5-7, 10-13, and 18-19 are missing and not shipped to the lab.

This inspection must be completed promptly in one to four weeks after the initial return of the images from duplication so that materials may be sent back to the laboratory for reshooting without paying any additional charges. The amount of time available to the curator for this inspection period must be written into the initial photographic duplication contract.

Preparing for Reshooting

After inspection, prepare the rejected images for return shipment to the photographic studio for reshooting by preparing a new outgoing loan agreement form and by boxing the images appropriately. After the new materials have been inspected and prepared for return, contact the laboratory to notify them of any problems and arrange shipment or pick-up of materials requiring recopying.

When the delivery is picked-up, add the pick-up date to the list of objects copy kept in the park. **NOTE:** Warn the delivery person not to leave the photographs, particularly cellulose nitrate negatives, in a warm vehicle as this could lead to their destruction and a possible fire. The inspection steps listed above will be repeated when the images are returned from copying.

Final Steps

Once all copies are inspected and judged to be satisfactory, arrange for rehousing, labeling, and return of the copy images to the appropriate places in their collections. Prepare any originals that are fragile or that are cellulose nitrate or cellulose acetate for cold storage. If during duplication any cellulose nitrate negatives are found to have emulsions that are beginning to powder or ooze, they may be proposed for destruction by the local fire marshall after they have been duplicated and passed inspection. Prepare appropriate deaccessioning

paperwork to propose this action. No materials should be approved for payment until the inspection has been completed and it is clear that all copying has been accomplished in a satisfactory manner.

References

American National Standards Institute (ANSI). *PH1.42-1985, American National Standard for the Storage of Processed Safety Photographic Film*. New York, NY: American National Standards Institute, 1985.

American National Standards Institute (ANSI). *IT 9.1-1988, A National Standard for Imaging Media (Film) Silver Gelatin Type-Specifications for Stability*. New York, NY: American National Standards Institute, 1988.

Hendriks, Klaus, B. Douglas, R. Madeley, Fred Toll, and Brian Thurgood. "The Duplication of Historical Black-and-White Negatives." *Journal of Imaging Technology* 12 No. 4 (1986): pp. 185-199.

Norris, Debbie Hess. "Preservation Planning for Diverse Photographic Holdings," *Photographic Preservation and the Research Library*. The Research Libraries Group, 1991.

Puglia, Steven T. *Negative Duplication: Evaluating the Reproduction and Preservation Needs of Collections*. Washington, DC: National Archives and Records Administration, reprint.

Wilhelm, Henry and Brower, Carol. *The Permanence and Care of Color Photographs: Traditional and Digital Color Prints, Color Negatives, Slides, and Motion Pictures*. Grinnell, Iowa: Preservation Publishing Company, 1994.

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