

**LSTA DIGITIZATION GRANTS  
2002-2003  
Information & Guidelines**

**What is this grant program?**

This grant program is a component of the Library Services and Technology Act project North Carolina ECHO ("*Exploring Cultural Heritage Online*"). North Carolina ECHO's goal is to use digital technologies to broaden access to the unique collections housed in North Carolina's libraries, archives, museums, and historical societies. To accomplish this, North Carolina ECHO has brought together representatives from the state's cultural institutions to conduct a comprehensive statewide needs assessment, formulate a set of guidelines for digitization, craft a continuing education program, create an online portal to the State's special collections, and develop grant programs to help accomplish NC ECHO's goal.

One of these grant programs, the LSTA Digitization Grant Program, is intended to help eligible libraries and partner agencies improve access to the special collections of North Carolina through the use of digital technologies. More specifically, this grant program supports various approaches to help meet NC ECHO's goal:

- online content creation,
- preparation of online finding aids for archival and/or manuscript materials,
- effective partnerships for digitization, and
- incorporation of Web cataloging or metadata into digitization projects.

The grant program aims to provide additional, quality online content that reflects the rich diversity of cultural resources held by the State's institutions and the people who created them, while encouraging collaborative ventures between libraries and other types of cultural repositories. In addition, the grant program seeks to build capacity and skills for digitization at the local level.

Grants do not support

- traditional arrangement, description, and cataloging of source material,
- retrospective conversion of catalog records,
- purchase or update of collection management systems, or
- preservation activities or materials (reformatting of media, preservation enclosures, etc.).

These grants are in a category called "Local Project Grants" in the policies and procedures outlined in *Library Services & Technology Act Plan for Implementation in North Carolina*, posted on the State Library's web page at URL <<http://statelibrary.dcr.state.nc.us/lsta/lsta.htm>>. The grant process has two steps aimed at saving time and other resources for those libraries that may not be competitive for a Digitization Grant in this round.

**Step #1: Letter of Intent:** Libraries interested in receiving a grant must have submitted (by the December 20, 2001 due date) a "Letter of Intent" that answers certain basic questions designed to determine whether the library is eligible to receive the grant and meets certain basic criteria. State Library staff review the Letters of Intent and the LSTA Advisory Committee determines which libraries are authorized to submit a full application.

**Step #2: Full Grant Application:** Those libraries that receive authorization are invited to submit a full application with a project plan and budget. Libraries will be notified January 15, 2002; applications will be due March 27, 2002. State Library staff, external reviewers, and the LSTA Advisory Committee will review the applications and make recommendations to the State Librarian regarding funding.

This grant program helps achieve Objective 1.6 of the *Library Services & Technology Act Plan for Implementation in North Carolina, January 2000* (available at URL <<http://statelibrary.dcr.state.nc.us/lsta/lsta.htm>>).

**A NOTE ABOUT COLLABORATIVE PROJECTS AND/OR  
PROJECTS REQUIRING ADDITIONAL PLANNING**

The time to prepare the Letter of Intent is limited. If your library has not developed community partnerships and/or does not have a clear concept and plan already outlined to enable you to prepare a well-crafted Letter of Intent, the State Library encourages you to consider applying for a planning grant for 2002-2003. You would then be well positioned to apply for a grant in 2003-2004. Several planning grant formats will be available during the upcoming year, and full information will be available in January 2002.

**Who may apply?**

Due to the nature of these federal funds

- libraries may apply directly for these grants and need not collaborate with another agency to receive funds, while
- non-library cultural agencies (e.g. archives, museums, historical/genealogical societies) **must collaborate with a library** in any project receiving support from this grant program, and
- libraries must be the lead project agent and be the grant applicant for any collaborative projects (i.e., manage the project, including acting as fiscal agent, serving as primary contact for the project, maintaining records and paperwork generated by the grant, assuring the successful implementation of the project, and taking responsibility for completion of final reports).

***These LSTA grants can only be awarded to libraries, and a library must serve as lead project agent in a collaborative endeavor.***

The following libraries are eligible to apply for these grants:

- public libraries that qualify for grants from the Aid to Public Libraries Fund
- community college libraries
- libraries serving the constituent institutions of the University of North Carolina (which includes libraries serving the Area Health Education Centers and the North Carolina School of Science and Mathematics)
- libraries serving the member institutions of North Carolina Independent Colleges and Universities, and
- the State Library of North Carolina.

***Libraries are encouraged to collaborate with non-library cultural institutions in their proposed grant projects.***

*Only libraries that submitted a Letter of Intent by December 20, 2001, and received authorization to submit a full application are eligible to apply for a Digitization Grant.*

An eligible public library system or academic institution may submit only one Digitization Grant application. [Definitions: *A library system is inclusive of all outlets making up that system (e.g. Nantahala Regional Library). An institution is the parent institution of the library (e.g. UNC-Greensboro).*]

Previously funded digitization grantees may reapply for funds for new digitization projects or expansion of previous ones. However, each application will compete as its own stand-alone grant project, and priority may be given to projects not previously funded. Applicants should not expect reviewers to possess a prior knowledge of previously funded projects as they change year-to-year.

**What amount of funds may be requested?**

The maximum grant request is \$50,000; the minimum grant request is \$5,000.

### Are local matching funds required?

Yes. Digitization Grant project budgets must include local matching funds.

- The local **cash** contribution to the project must equal a minimum of 10% of the amount of federal funds requested. The match is a 1 to 10 ratio of matching funds to grant funds. Example: If the grant amount requested is \$20,000, the local match must be at least \$2,000, and the total project cost will be \$22,000 (\$20,000 grant funds + \$2,000 local funds).
- All of the match must be cash from local or state funds or funds from non-governmental agencies (e.g. foundations, service clubs, partner agencies). Other federal funds and local administrative overhead costs may **not** be used as local match.
- Matching funds must be available at the time a funded library signs the grant agreement.

*No expenditures of either grant or local matching funds may be made until the library receives the final executed grant agreement signed by library representatives and the State Librarian.*

### How may the project funds be used?

Digitization Grant project funds are intended to expand access to the special collections of North Carolina's cultural repositories using the Internet and digital technologies. This includes

- digital imaging of primary research materials (manuscripts, artifacts, artwork, photographs, rare books, broadsides, and pamphlets, etc.) and presentation of digital reproductions over the Internet

*and/or*

- the creation or conversion of online finding aids for archival or manuscript collections using EAD (Encoded Archival Description).

The proposal must clearly state how each proposed expenditure was determined and why it is needed to achieve project outcomes.

Allowable expenditures may include:

- **Equipment**, including scanners, computers, and computer peripherals (i.e. printers, CD-ROM Read/Write "burners," CD "caddies," etc.) as well as sufficient memory and storage. Any application that requests equipment should clearly state how that equipment will be used to support the project. *This grant program encourages healthy work environments. Any equipment purchased with grant funds should be ergonomically correct.*
- Basic imaging **software** (e.g. Adobe Photoshop)
- **Supplies** (CDs, floppy disks, photo paper)
- **Travel and subsistence** required for meetings of representatives of collaborating institutions
- Cost of project personnel **training**
- **Personnel** (salary and benefits of temporary employees or expansion of part-time staff)

Equipment guidelines for the LSTA Digitization Grant may be found in <b>Appendix A</b> of these guidelines.
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#### ***Ineligible expenses:***

- On-going operating costs, such as monthly Internet Service Provider (ISP) fees
- Furniture
- Entertainment costs
- Costs of traditional arrangement, description, cataloging, and preservation measures
- Salary and benefit supplements/reimbursements for existing full-time employees
- LSTA grant funds may **not** be used for "overhead" or indirect costs.

## **Outsourcing**

Funds from these grants may be used to support outsourcing of various digitization processes. However, if a proposal will rely heavily on outsourcing to achieve the digital content, this approach will be carefully scrutinized. For example, if a library had only one item worthy of digitization, outsourcing would be a more acceptable approach than if a library had dozens of collections and hundreds of items. In the latter case, it might be more appropriate to consider building local capacity, knowledge, and skills.

In its application, a library proposing outsourcing (for an entire project or portions of a project) must provide the rationale for selecting this method, show that the outsourcing approach is cost effective, and assure that the chosen vendor's products and procedures are consistent with NC ECHO's "Guidelines for Digitization" (available at <<http://204.211.39.118/Guide/index.htm>>).

## **What is the basis for selecting projects for funding?**

To be eligible for consideration, a library must have submitted a Letter of Intent, have been authorized to submit a full application, and have submitted a full application that is received by the deadline of 5:00 p.m. March 27, 2002. (See pages 9 & 10 for details about how to submit an application.)

Proposals must clearly and explicitly cover the following factors and meet the following criteria, which will guide funding decisions among the eligible applications:

### **I. Prior application of traditional methods of access and preservation**

Institutions submitting proposals must have already implemented traditional arrangement, descriptive cataloging, and preservation measures with the materials that will be digitized.

*"Traditional practices form the superstructure of any digital project: basic preservation techniques, good descriptive cataloging, and standard arrangement and description must be performed before the scanner can be plugged in. Digitization is not a "replacement activity," but rather an addition to traditional cultural repository techniques and procedures, and in many cases is an enhancement of them. Finding aids, registration records, and other more traditional information management tools are the starting points for digitization projects."* From North Carolina ECHO's "Guidelines for Digitization".

Applicants must demonstrate that

- all primary source materials to be digitized are housed in preservation enclosures and stored in a heated and air-conditioned facility with some form of humidity control.
- all primary source materials to be digitized have been accessioned into a collection management system for archives or museums (automated or hard copy variety), library online catalog, or some similar form of appropriate access.

Grants will neither fund arrangement, description, or cataloging, nor preservation activities or materials (reformatting of media, preservation enclosures, etc.).

### **II. Ability and Intent to follow the "Guidelines for Digitization" document**

Project plans must clearly demonstrate that participating institutions will follow the NC ECHO "Guidelines for Digitization" in implementation.

Recognizing that there were many questions surrounding the use of digital technologies to provide greater access to their holdings, representatives of North Carolina's special collections joined together to create a "Guidelines for Digitization" document, available at <<http://204.211.39.118/Guide/index.htm>>. This document draws upon the best practices and standards employed by major digitization projects to assist organizations in their own digitization projects from planning to implementation. It also contains links and bibliographies to more in-depth information about various aspects of digitization. As a part of this overview, the "Guidelines" document suggests specific best practices for scanning, storage, and use of metadata (cataloging).

Applicants will be expected to follow these suggestions, specifically but not limited to

- scanning at suggested resolutions,
- creation of a master image as well as an access image with appropriate storage media and formats (TIFF, JPEG, etc.),
- use of Dublin Core Metadata for at least the collection level of digitized materials and the use of the 856 field in a MARC record to tie the digital copy to an on-line catalog.

Applicants will be expected to follow best practices and accepted standards for access to ensure that digital products developed locally can be accessed both through the Internet and through library on-line catalogs.

Because of the evolving nature of Web-based audio and video resources, standards have not yet emerged to guide applicants and reviewers. Any application seeking to provide access to music, oral histories, motion pictures, etc., will be viewed as a demonstration project by reviewers. Applicants should strive to develop projects that test various approaches to digital audio and video delivery, metadata, and the required infrastructure. Letters of Intent and resulting applications should clearly demonstrate an understanding of the technical challenges in providing this media via the Web (e.g. storage, speed).

The grant program seeks to build capacity and skills for digitization at the local level. Any application proposing to outsource work on a portion of its project must provide the rationale for choosing this method, show that this approach is cost effective, and assure that the vendor can follow the best practices and standards found in NC ECHO's "Guidelines for Digitization" document. *Institutions should consider testing the vendor's services with a small sample of materials prior to investing a substantial amount of money in outsourcing. The results of any test should be described in the proposal.*

Additionally, any creation of Web-based finding aids to archival collections must make use of Encoded Archival Description (EAD).

In addition, the ability to present digital reproductions over the Web (Web page creation skills) should be clearly demonstrated.

The State Library will make a hardcopy version of the "Guidelines for Digitization" document (<<http://204.211.39.118/Guide/index.htm>>) available upon request.

- Appendix B of these grant guidelines (a reproduction of the table from section 4.5 of the "Guidelines for Digitization") notes the resolutions of master and access images of most common types of primary source materials required by this grant program.
- Appendix C discusses the "Scan Once" methodology suggested by the "Guidelines," as well as appropriate storage media and formats.
- Appendix D briefly discusses the use of Dublin Core and provides an example of its use.
- An overview of EAD may be found at <<http://www.loc.gov/ead/>>.

### **III. The *quality* and *quantity* of content to be provided by the proposed project.**

Proposals will be evaluated on the basis of both the quantity and quality of the content that will result from the project.

Applicants must demonstrate that their proposed project would provide quality online content, which reflects the rich diversity of cultural resources held by the State's institutions and the people who created them. The size and scope of the proposed grant project (number of digital images, amount of related cataloging, and extent of Web page material needed for context) will also be a factor in award decisions. In this round of grants content of statewide significance will be favored while that of local import should be demonstrated to be of *considerable local significance* (and with the appropriate contextual information having potential for a wider audience).

*All materials to be digitized using Digitization Grant funds must be in the public domain, be held by applicant institutions, or have the copyright holder's written permission to be published on the Web.*

#### **IV. The use of collaboration and effective partnerships to enhance access to special collections**

Projects that demonstrate effective collaboration to expand digital access to North Carolina's cultural resources will be given priority; however, those partnerships with other institutions must clearly benefit users by drawing upon individual institutions' strengths, such as collections, experience, and/or technical capabilities. The partnership should extend beyond two (or more) institutions simply cooperating to request funds for equipment to digitize portions of separate collections. The plan, jointly conceived, should demonstrate a clear focus and shared mission for the proposed project. Applicants should demonstrate the effectiveness of the proposed partnership(s) by

- stating clearly and precisely what each institution will contribute to the project,
- describing prior experience or commitment to working with the proposed partner(s), and
- providing strong evidence of a shared understanding of how the project's processes will be managed.

The proposal should clearly describe the nature of the relationship to reflect those qualities, and reviewers will be evaluating collaborative projects using these criteria:

- Partners are appropriate agencies and institutions and have worked together before or have demonstrated their ability to work together by sharing responsibility for planning the project;
- The partner organizations have clearly shared responsibility for determining the need and developing the project plans;
- The goals of the partnership focus on the goal of expanding access to the resources held by the participating organizations and not on the needs of the organizations;
- Each partner organization is fully supportive of the project and playing an active role in the project;
- The role of each partner is clearly defined, and the proposal demonstrates that this will be reflected in the project by describing those roles and specific information about contributions that each organization will make;
- The proposal clearly shows that there is shared authority, leadership is disbursed, and control of the project is shared—and all these elements are clearly defined;
- Resources for the project are pooled or jointly secured for the longer-term effort that is being organized, and
- The partnership and/or programs developed as part of the project are sustainable over time.

All collaborating partners will be expected to include letters of commitment in their application. These letters should state the clear ownership of any equipment purchased during the project and any digital creations resulting from the project, as well as the willingness of the institutions to assume the responsibility(ies) detailed in the application—both during the project and for the long term sustainability of the digital creation(s).

#### **V. Commitment by the institution(s) to providing ongoing access after the project is completed and sustainability of a digitization program.**

Only those applicants that demonstrate a strong commitment and capability to maintaining the online availability of the resources created by the grant project following its completion will be funded.

Applicants should demonstrate that they

- have adequate in-house expertise or will be able to provide training to meet project requirements in both creation and long-term maintenance,
- have adequate information technology infrastructure to host and deliver the digital product,
- have adequate and appropriate means for long-term storage and back-up of master images,
- have developed a process or processes by which the institution(s) will be able to make an adequate evaluation of the project.

Applicants will be expected to follow best practices and standards to assure long-term availability of both the on-line digital creation and associated digital master images.

## **VI. Overall quality and clarity of plan, including budgets.**

Proposals must be clear in the description of the proposed project plan and should not assume that reviewers have any familiarity with the applicant institutions or prior projects. Proposals must:

- Clearly describe outcomes of the project;
- Have a realistic action plan;
- Provide enough information for reviewers to understand the collection(s), their status, and value; capabilities of the applicant(s); activities to be implemented; and funds to be expended (Tip: Do not submit a proposal that raises more questions than it answers.);
- Demonstrate that alternative approaches have been considered, and why the proposed plan is the most desirable.

Project budgets are expected to:

- Be appropriate to the plan outlined in the proposal and clearly linked to that plan;
- Explain the basis for all projected expenditures and the basis for the estimates with no unexplained, miscellaneous, or contingency amounts;
- Be reasonable;
- Salaries and benefits are detailed separately;
- Includes information (e.g. experience and qualifications) about any proposed consultants and other contractual services;
- Relates any travel expenses to the project plan;
- Excludes all disallowed expenditures;
- Meets local match requirements.

### **What is the review process?**

- Letter of Intent: Libraries interested in receiving a Digitization Grant must submit by December 20, 2001, a brief "Letter of Intent" which explains the project concept and will indicate whether the library is eligible.
- State Library staff and the LSTA Advisory Committee review the Letters of Intent, and the LSTA Advisory Committee will determine which libraries are authorized to submit a full application. Libraries are notified by January 15, 2002.
- To be eligible for review, grant applications must be received in the State Library's Library Development Section Office (Room 210, Archives & State Library Building) by 5:00 p.m. March 27, 2002.
- Only complete applications from eligible institutions (those authorized to submit a full application) will be reviewed.
- Eligible applications will be reviewed and evaluated by State Library staff and the Access to Special Collections Work Group according to the grant program criteria. The LSTA Advisory Committee will consider the applications in conjunction with reviewer evaluations and make recommendations to the State Librarian regarding funding.
- Since the LSTA Advisory Committee reviews all LSTA Local Project Grants and makes funding recommendations, no appeal is available.
- Announcement of funded applications will be posted to the State Library's web site (at URL: <<http://statelibrary.dcr.state.nc.us/lsta/lsta.htm>> and <[www.ncecho.org](http://www.ncecho.org)>) by the July award announcement date.
- No project funds (grant or matching dollars) may be encumbered or expended until library representatives and the State Librarian sign the grant agreement.

### **How are grant payments made?**

Grant funds are paid on a reimbursement basis. Libraries pay project expenses using local funds, and are then reimbursed for *actual* documented expenses up to the grant amount awarded.

Grant payments will only be made for expenses incurred after a library is awarded a grant and library representatives and the State Librarian have signed the grant agreement.

Grantees must submit requests for reimbursement once a quarter, at a minimum. This ensures an even flow of grant payments. This process also assists the Department of Cultural Resources in managing its monthly allocations from the state.

By the postmark date of April 15, 2003, a minimum of seventy-five percent (75%) of the grant amount must be requested for reimbursement. Requests received by this date will be paid by June 30, 2003. At the same time grantees must also estimate the remaining grant expenses that will be claimed; these expenses will be paid after June 30.

July 15, 2003 is the final deadline for grant payment/reimbursement requests to be received or postmarked. The State Library will complete all payments by August 30, 2003.

The State Library understands that costs of computer equipment change rapidly. If the proposed equipment is purchased for less than the grant award amount, the library must obtain State Library approval to use the balance of the grant funds. The State Library does not guarantee approval for additional purchases in order that all grant funds can be used.

### **What reports must grantees make?**

As part of the evaluation process for this grant program, all grant recipients must complete a report on the grant project. It will be due to the State Library by September 30, 2003. The report will include a summary of grant expenditures and appropriate descriptions of the grant's impact on access to the special collections held by the grant recipient(s). The State Library will provide a form for the grant report.

### **What else do applicants need to know?**

Because these grants are from federal funds administered through a state agency, all grantees must adhere to required federal and state provisions. (See **Grant Provisions**, page 15.) Please read these carefully.

### **Grant program timeline:**

These deadlines apply to the 2002-2003 Digitization Grants.

November 27, 2001	Letter of Intent (LOI) announcement for Local Project Grants; Guidelines and LOI application available at URL <a href="http://statelibrary.dcr.state.nc.us/lsta/lsta.htm">http://statelibrary.dcr.state.nc.us/lsta/lsta.htm</a>
December 20, 2001	Letters of Intent due by 5:00 p.m. *
January 15, 2002	Notification of authorization to submit full application; full application form available at URL <a href="http://statelibrary.dcr.state.nc.us/lsta/lsta.htm">http://statelibrary.dcr.state.nc.us/lsta/lsta.htm</a>
March 27, 2002	Applications due by 5:00 p.m. *
July 10, 2002	Announcement of funded projects
July 2002 – June 30, 2003	Grant project implementation period
October 15, 2002	Postmark deadline for first grant reimbursement request
January 15, 2003	Postmark deadline for second grant reimbursement request
April 15, 2003	Postmark deadline for third reimbursement request; a minimum of 75% of grant amount must be requested by this deadline. Also due: estimate of any grant balance that will be claimed after June 30.
June 30, 2003	Date by which all project funds must be spent
July 15, 2003	Final date to submit reimbursement request for balance of grant
August 30, 2003	State Library completes grant payments
September 30, 2003	Final report due to State Library

\* Must be received in the State Library's Library Development Section Office, Room 210 Archives & State Library Building.

### **Instructions for preparing and collating your full application:**

Your final application is one of many that reviewers will read. (Some State Library staff reviewers read over 200 applications.) Following these instructions will make it easier for reviewers to read and digest your proposal:

- Use an 11-point font size or greater and margins at least 1" on all sides. Concise wording is best.
- Repeat questions and question numbers from the application form, but do not repeat explanatory information.
- Copy your pages back-to-back on plain white paper.
- Use a header or footer, with a single page numbering system, throughout the whole document except for the State Library's initial signature page. Handwritten page numbers on attachments are acceptable.
- Any supplemental information or attachments should follow the completed application form.
- If you append any material not specifically requested in the application, be judicious in how much you include. Provide extracts of long documents. Reviewers can pay more careful attention to applications that are concise and supporting materials that are directly relevant.

### **Where do I apply?**

Completed application forms should be sent to the address below. Send 26 copies of your full application, including one with original signatures in blue ink. All applications must be received in the State Library's Library Development Section Office (Room 210, Archives & State Library Building) by 5:00 p.m. on March 27, 2002.

<b>Delivery by US Postal Service:</b>	<b>Delivery by commercial service (e.g. FedEx), or hand delivery: RECOMMENDED</b>
LSTA Grant Applications	LSTA Grant Applications
Library Development Section	Library Development Section (Room 210)
State Library of North Carolina	State Library of North Carolina
4640 Mail Service Center	Archives & State Library Building
Raleigh, NC 27699-4640	109 E. Jones Street, Room 210
	Raleigh, NC 27601

### **WARNING:**

**To be considered, applications must be received in the Library Development Office by the 5:00 p.m. March 27, 2002 deadline.** To assure on-time receipt by the State Library, applicants are strongly encouraged to use a commercial delivery service and the Jones Street address. Packages sent via US Postal Service and the Mail Service Center address (even Express Mail) frequently encounter delivery delays, and the US Postal Service does **not** deliver directly to the Jones Street address. Any application not received by the deadline will not be eligible for consideration.

### **For further information contact:**

Kevin Cherry, Consultant for Special Collections, or Penny Hornsby, Federal Programs Consultant; State Library of North Carolina, Library Development Section; telephone: 919.733.2570; or e-mail: [kcherry@library.dcr.state.nc.us](mailto:kcherry@library.dcr.state.nc.us); [phornsby@library.dcr.state.nc.us](mailto:phornsby@library.dcr.state.nc.us).

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**APPENDIX A**  
**LSTA Digitization Grants**  
**2002-2003**  
**EQUIPMENT PURCHASE GUIDELINES**

**COMPUTER**

Processor	Minimum:	800 MHz or equivalent
	Recommended:	1.8 GHz or equivalent
Hard disk	Minimum:	40 GB hard drive With expansion slot
RAM	Minimum:	384 MB RAM
	Recommended:	512 MB RAM
Video Memory	Minimum:	32 MB video memory (VRAM)
	Recommended:	64 MB video memory (VRAM)
Optical devices	Minimum:	CD-RW (ISO 9660 compliant)
	Recommended:	CD-RW
Removable Media	Recommended:	High-density removable (zip or Jaz drives for short-term backups)
Monitor	Minimum:	19" SVGA monitor
	Recommended:	21" SVGA monitor
	Recommended:	Supports ICC profiles

**SCANNER**

Scanning Area	Minimum:	8.5" x 14" (legal-sized)
Resolution	Minimum:	1200 x 2400 optical scan resolution (not interpolated resolution)
Bit Depth	Minimum:	36 bit color depth
	Recommended:	42 bit color depth
Dynamic Range	Minimum:	3.4
	Recommended:	3.9
Scanner Software	Minimum:	Supports TWAIN
Accessories	Recommended:	Transparent media adapter (for negatives & slides)
Interface	Recommended:	SCSI

**PRINTER**

Resolution	Minimum:	1200 DPI, laser color
	Minimum:	Capable of using photographic paper

**APPENDIX B**  
**Master and Access Image Resolution**  
**From Table 4.5 of "Guidelines for Digitization"**

The following table states the suggested resolutions, bit depths, and storage formats of master, access, and thumbnail images. A best practice for digital reproduction of objects (e.g. museum artifacts and other three-dimensional items) is first photographing the object using traditional cameras, then digitizing the resulting photographs.

<b>File Type</b>	<b>Text</b>	<b>Photographs</b>	<b>Documents</b>	<b>Maps, Drawings</b>	<b>Objects</b>
<b>Master File</b>	Scan at 200-300 dpi grayscale. 11" on long side. Uncompressed TIFF Intel (IBM) byte order 200 dpi at original size. A bit depth of 8.	Scan at 4000 pixels on long side or 600 dpi. Uncompressed TIFF Intel (IBM) byte order 4000 pixels on long dimension or 600 dpi at original size; scan RGB color 24 bit; Black and white scan at 8 bit grayscale.	Scan resolution 4000 pixels on long dimension or 600 dpi. Uncompressed TIFF Intel (IBM) byte order 4000 pixels on long dimension or 600 dpi at original size. RGB color bit depth 24.	Scan at 300 dpi. Intel (IBM) byte order 4000 pixels on long dimension or 600 dpi at original size. RGB color, bit depth 24.	Traditional photography followed by scan.
<b>Access File</b>	8 bit grayscale. JPEG 4-6 on a 1/10 scale (medium). File resolution 200 dpi unaltered image size.	8 bit grayscale, 24 bit color. JPEG 8-10 on a 1/10 scale (high). File resolution 300 dpi unaltered image size.	8 bit grayscale, 24 bit color. JPEG 8-10 on a 1/10 scale (high). File resolution 300 dpi unaltered image size.	8 bit grayscale, 24 bit color. JPEG 8-10 on a 1/10 scale (high). File resolution 200-300 dpi unaltered image size or reduced to equivalent of 8 x 10"	
<b>Thumbnail</b>	Generally not used for text files.	4 bit grayscale, 8 bit color. JPEG 4-5 on a 1/10 scale (medium) 72 dpi	4 bit grayscale, 8 bit color. JPEG 4-6 on a 1/10 scale (medium) 72 dpi	Optional for Bitonal maps & drawings. 4 bit grayscale, 8 bit color JPEG 4-6 on a 1/10 scale (medium) 72 dpi	

## APPENDIX C "SCAN ONCE" METHODOLOGY

It is expensive for institutions to go back and re-digitize their holdings. Few ever do so. In addition, many originals could suffer from the handling and exposure to bright light required by digitization. Therefore it is best to simply "scan once," create a master image, and make any future duplicates from it.

### **Step One--Create a Master Image**

The highest quality copy of a digital image, often called the master image, is expected to be a quality surrogate of the original. As such, it should represent the *un-manipulated* original and be created at a high resolution and stored in an uncompressed format (usually TIFF). Compression causes loss of original information. (JPEG is a storage format that uses compression.) High resolution equals larger amounts of information captured, and large amounts of captured information usually equals a higher quality digital image. The higher the quality, the longer the life of the digital copy and the more versatile its uses. It is the master image that holds the promise of versatility and longevity. From it, high quality prints or publications might be made, and future, higher-quality images might be derived for faster and more robust digital technologies of tomorrow.

### **Step two--Create Access Image**

Access images are lower resolution copies taken from the master by using a "save as" function and changing the storage format and resolution. They may be of varying quality and are generally manipulated for better display upon the screen or page (cropping, re-sizing, etc.) Additional images, such as "thumbnails" (even lower resolution copies) may also be created from the master or access image. These thumbnails allow for even quicker downloads of pages, and faster retrieval of large numbers of images. Appendix B of this document states the suggested resolutions, bit depths, and storage formats of each of these types of digital reproductions (master, access, and thumbnail).

### **Step three--Storing the Master Image**

The master image is the copy to be maintained for the long-term. As such, it should be stored appropriately. Master images take up a great deal of space, and most institutions will not wish to store them for the long-term on computer hard drives. Some institutions maintaining large amounts of digital images will wish to work with a form of tape or server backup, while those institutions engaged in more modest digital projects may wish to copy master images onto CDs. If an institution decides to follow the CD as a storage medium, it is suggested that two copies of each CD be prepared and stored separately. One will serve as the "master" CD and the other will be a "use" CD from which access images, copies for users, etc. may be prepared. CD's used in this way should be "refreshed" regularly, that is copied from the old CD to a new CD (approximately every 5 years.) Not all CDs are equal. Master images should be stored on CD-R gold. The gold in the CDs does not oxidize, thus the storage medium lasts longer.

**APPENDIX D  
DUBLIN CORE ELEMENT SET**

Libraries and other cultural institutions could digitize huge amounts of material, but if there were no descriptions or ways to find that digital information, it would help their users little. Metadata, information about information, helps researchers find what they are looking for. Simply put, it is old-fashioned cataloging of new-fangled types of information. Dublin Core is a simple metadata system composed of 15 element sets (see table below). They are familiar points of access to most users of cultural institutions. These fifteen elements are placed within the appropriate HTML tags, and then are placed in the header of the Web Page that holds the digitized collection on the Web. They can also be stored locally in a database, from which the information can be exported in a variety of ways to meet an array of means of access and user needs. For more information, see the metadata section of "Guidelines for Digitization."

**Table 5.4 from "Guidelines for Digitization"**

<b>TITLE</b>	<title>	The name of the object. The title of a book, name given a work of art, name of manuscript collection, map name, etc. If item is unnamed give the item descriptive title. Omit articles such as 'the', 'a', 'an', etc. which often come at the beginning of a descriptive title.
<b>CREATOR</b>	<creator>	The person or organization responsible for the creation of the object, collection, item. This includes the artist, writer, designer, photographer, cartographer. Last name first, first name last.
<b>SUBJECT</b>	<subject>	Key words and key descriptive terms generally derived from Library of Congress Subject Headings, Art and Architecture Thesaurus, or similar standard vocabularies. Use proper names. Consult the Anglo American Cataloging Rules 2 (AACR2) or other authorities.
<b>DESCRIPTION</b>	<description>	Description may be the subject matter, the physical properties, or an abstract of the content. Examples: 'Journal of a Trout Fisherman', 'Round Carved-Poplar Bowl', 'This manuscript contains records of the textile mills in Gaston County'.
<b>PUBLISHER</b>	<publisher>	If material is formally published, the name of the publisher, or the name of the repository where material resides.
<b>CONTRIBUTOR</b>	<contributor>	Person or organization that contributed to the assembly, organization, fabrication, illustration, translation, editing, or other secondary role.
<b>DATE</b>	<date>	The date of creation of the item. When entering date, use YYYY-MM-DD for the exact date (2000-10-05 for October 5, 2000). Also preferred: ca. 1952 and 1952/53.
<b>TYPE</b>	<type>	Refers to the general format of the item, such as sound recording, image, physical object, collection, or text. See Dublin Core Type Vocabulary for a complete list of types.
<b>FORMAT</b>	<format>	The dimensions, number of pages, number of objects, length of audio tape, cubic feet, linear feet, etc.
<b>IDENTIFIER</b>	<identifier>	A number or alpha-numeric or other identifier that is unique to the object. This may be the accession number, record number, ISBN number, or the URL (Universal Resource Locator or World Wide Web address).
<b>SOURCE</b>	<source>	Refers to the original when object has been digitized. In EAD refers to the acquisition information ,<acquinfo>
<b>LANGUAGE</b>	<Language>	The language of written objects. A two-character code based on the Internet Engineering Task Force standard RFC 1766. Examples: en=english, es=Spanish, etc. For languages not included in the codes, use the full name.
<b>RELATION</b>	<relation>	The relation to other objects. Examples: 'short story based on song Muskrat Ramble'; 'model for Civil War Monument'; 'part of a version of ...'
<b>COVERAGE</b>	<coverage>	Geographic location and/or the time period. Use standardized proper names derived from the Getty Thesaurus of Geographic Names or the LC Subject Headings, or other standardized references. Enter time periods as 1942-12-10 and 1952/1953.
<b>RIGHTS</b>	<rights>	Describe the rights to access the item or collection. Example: "Permission to use the photograph must be obtained from the photographer "; "Item is copyrighted until 2010"; In the public domain"; "Must cite the University of NC at XXX, etc.

In addition to this descriptive metadata, institutions will also wish to maintain a record of "administrative metadata," information such as the hardware and software types and settings used in the scanning, storage format and media, date scanned, etc.

## GRANT PROVISIONS

The following state and federal provisions apply to the LSTA grant program. Libraries awarded grants must agree to comply with these provisions.

### 1. Grant Agreement and Timing of Expenditures

Official notification of the grant award must be received from the State Library and a grant agreement (formal agreement between the grantee and the State Library) signed by both the representatives of the library and the State Librarian *before* any funds may be encumbered or expended for the project.

### 2. Allowable and Unallowable Costs

Grantees must carry out the grant project according to the approved grant proposal, and all federal funds must be expended solely for the purpose for which a grant was awarded.

The following costs are unallowable and may not be proposed as grant project costs: bad debts, contingencies, contributions and donations, entertainment, fines and penalties, under recovery of costs under grant agreements (excess costs from one grant agreement are not chargeable to another grant agreement).

### 3. Legal and Regulatory Compliance

Grantees must expend grant funds in accordance with all applicable local, state, and federal laws and regulations.

### 4. Budget Revisions and Programmatic Changes

Grantees must not deviate from the approved budget and plan for carrying out the grant project as contained in the approved grant application unless prior approval is obtained from the State Library.

### 5. Records Retention

Grantees must maintain adequate financial records to ensure complete reporting, and retain programmatic and financial records relating to the grant for a minimum of three years from the due date of the final grant report.

### 6. Free and Open Competition

Purchases made from grant funds must be carried out to ensure free and open competition to the extent possible. Libraries eligible to purchase under state contract may use this option for grant purchases.

### 7. Debarment & Suspension

Transactions for the purposes of this grant will not knowingly be made with parties who have been debarred or suspended from receiving Federal financial assistance under Federal programs and activities (Debarment and Suspension Certification).

### 8. Equipment and Inventory

Equipment with unit price above \$500 purchased with grant funds must be labeled as purchased with LSTA funds and listed on biennial inventory reports requested by the State Library. If fair market value at the time of surplus or disposal exceeds \$5,000, disposal must be cleared with the State Library.

### 9. Publications and Presentations

Grantees are expected and encouraged to publicize projects in available and appropriate media outlets. Public relations releases concerning the project, or any publications or materials produced as a part of the grant project, must include the following statement: "This project is \_\_\_\_% supported with federal LSTA funds made possible through a grant from the Institute of Museum and Library Services, administered by the State Library of North Carolina, a division of the Department of Cultural Resources." Copies of any publications or materials produced under the grant must be submitted to the State Library.

### 10. Lobbying

Grantees are prohibited by federal law from using grant funds to pay costs associated with lobbying Congress or the public for purposes of influencing elections, legislation, or the award of any federal funds. Grantees receiving an award of over \$100,000 must file a certification regarding lobbying.

### 11. Non-discrimination

All library services provided as a result of the federal grant funds must be available without discrimination to all members of the community served. Participation may not be denied on the basis of race, color, national origin, handicap, age, or sex.

### 12. Audit Requirements

Grant funds must be audited in compliance with state and federal audit requirements for local governments and public authorities, institutions of higher education, and non-profit organizations, and, as applicable, according to the standards of the Single Audit Act of 1984 as amended 1996.

### **SOURCE DOCUMENTS:**

General Statute 143-6.1 and applicable prescribed requirements in the Office of the State Auditor's Audit Advisory #2 "Rewrite of G.S. 143-6.1 entitled "Nonprofits State Funds Accountability Act -- Reports on the Use of State Funds by Non-State Entities" including its attachments.

Office of Management and Budget (OMB), Circular A-87 Revised, ("Cost Principles for State, Local, and Indian Tribal Governments").

OMB Circular A-21, ("Cost Principles for Education Institutions").  
OMB Circular A-122, ("Cost Principles for Non Profit Organizations").

Title VI of the Civil Rights Act of 1964; Section 504 of the Rehabilitation Act of 1973; Section 6101 of the Age Discrimination Act of 1975; The Americans With Disabilities Act of 1990; subject to certain exceptions, Title IX of the Education Amendments of 1972.

Code of Federal Regulations, 31 U.S.C. Section 1352 (certification regarding lobbying).

Code of Federal Regulations, 45 CFR Part 1183, ("Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments").

OMB Circular A-133 Revised, ("Audits of States, Local Governments, and Non-Profit Organizations").