

## Section 3

### INTERIOR CONSIDERATIONS

This, and the following five sections of the building program for the new Searcy Public Library, delineates a direction for the many interior design decisions required in a library project. The sections are intended to provide all parties with several general considerations that the library consultant, Godfrey's Associates, Inc., believes are important for a library facility that strives to be functional and cost efficient to operate.

These considerations apply to both the design process and the construction documentation process. They are intended to stimulate discussion and narrow potential options by advancing proven solutions utilized in other libraries.

The considerations are, as stated, intended to be guidelines, not mandates. They are presented here based upon the experience of the programming consultant. Their purpose is to assist with the overall quality, maintainability, and functionality of the building. The architects are, of course, encouraged to propose alternatives they believe will result in an even better facility.

In order to focus the efforts of the architects and engineers the subsequent considerations are presented in the following order:

- Section 4 - Mechanical Systems Considerations;
- Section 5 - Building Characteristics;
- Section 6 - Building Technology Considerations;
- Section 7 - Lighting Systems Considerations; and
- Section 8 - Security Considerations.

Each of the major building systems supporting the new Searcy Public Library are described in an effort to begin to define the scope of construction in as much detail as possible. These discussions are intended as guidelines for the architects and engineers. They include planning and design issues that affect both construction and operational costs.

#### GLASS TREATMENT

Consider reducing summer solar heat gain by shading glass exposures with canopies, louvers, solar glass screens, etc. Shaded glass admits only one-quarter of the radiant heat admitted by un-shaded glass exposed to sunlight. Double-glazed, shaded, heat-absorbing glass reduces heat gain by about 85 percent. Reflective glass reduces heat gain by about one-third. Consideration should also be given to low-e glass, recognizing that it does restrict daytime views into the building's interior.

## CONTROL WITH MINIMUM STAFF

The building and furnishing layouts must be planned so visual control of public areas is accomplished with a minimum number of staff. Give special attention to visual control of entrances, exits, and entrances to public restrooms.

## ERGONOMIC WORKSTATIONS AND WORKSTATION GUIDELINES

Given that Library staff will spend a considerable part of each workday at a workstation, either in the Staff Workroom or at a Library Customer Service Desk, ergonomics is critically important to protect the health and well being of the staff.

Ergonomics is a scientific discipline concerned with improving staff productivity, health, safety, and comfort as well as promoting effective interaction among people, technology, and the environment in which both must operate.

Design consultants are encouraged to specify adjustable equipment for the reasonable accommodation of users, public and staff. Some may have special needs, such as left-handedness, color blindness, vision impairment, etc. The goal should be flexibility to accommodate the user population so that personnel may interface effectively with equipment. Equipment should be sized to fit the individual user. Ergonomic furniture should be designed to facilitate task performance, minimize fatigue and injury by fitting equipment to the body size, strength, and range of motion of the user. Ergonomically designed furniture can reduce pain and injury, increase productivity, improve morale, and decrease complaints.

Office and workroom furnishings generally have adjustable components that enable the user to modify the workstation to accommodate different physical dimensions and the requirements of the job or task at hand. The purchase of equipment should be task specific to eliminate:

- Static or awkward posture;
- Repetitive motion;
- Poor access or inadequate clearance and excessive reach;
- Display difficult to read and understand; and
- Controls confusing to operate or requiring too much force.

Therefore, furniture that the design consultant specifies should be suitable for the types of tasks performed and adaptable for multi-purpose use. Office workstations **must** be designed carefully to meet the need of the staff and to accomplish the goals of the facility. Design objectives should support humans to achieve the operational objectives for which they are responsible.

There are three goals to consider in human-centered design:

- Enhance abilities;
- Overcome limitations; and
- Foster user acceptance.

To achieve these objectives there are four elements to consider:

- Equipment - video display terminals;
- Software design - system and screen design for greater usability;
- Workstation design - chairs, work surfaces, and accessories; and
- Training - preparing workers to deal with technology.

### **Guidelines<sub>1</sub> for Chairs**

- **Seat Height** - Pneumatically adjusted while seated. A range of 16 - 20 ½" off the floor will accommodate most users. Thighs should be horizontal, lower legs vertical, feet flat on either the floor or a footrest. Seat height should allow a 90 degree angle at the elbows for computer use/typing;
- **Width & Depth** - A width of 17-20" will be adequate for most and should be deep enough to permit the back to contact the lumbar backrest without cutting into backs of knees. The front edge should be rounded and padded. Seat slant adjustable 0 - 10 degrees and the seat should swivel easily. Bucket-type seats are to be avoided;
- **Backrest** - Backrest should offer firm support, especially in lumbar region, be 12-19" wide, and with an easily adjustable angle and height while seated. The optimum angle between seat and back should allow working posture of at least 90 degrees between spine and thighs. Seat pan angle and backrest height and angle should be coordinated to allow the most comfortable weight load on spinal column;
- **Seat Material** - Seat and back padded enough to allow comfortable circulation. Too soft a seat results in muscles always adjusting to maintain steady posture causing strain and fatigue. Fabric should "breathe" to allow air circulation through clothes to skin; and
- **Armrests** - Optional, depending upon user preference and task performed. They should ***not*** restrict movement or impede ability to get close enough to work surface.

### **Ergonomic Chair Checklist**

1. Wheels or castors suitable for the floor surface.
2. Swivels.
3. Backrest adjustable for height and angle.
4. Backrest supports inward curve of lower back.
5. Height is appropriate for user and work surface height.

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<sup>1</sup> Guidelines developed from the American National Standards Institute and the Environmental Health and Safety Center.

6. Adjusted so no pressure on backs of legs.
7. Adjusted so feet are flat on floor or footrest.
8. Adjustable from sitting position.
9. Upholstery a breathable fabric.
10. Footrests used if feet cannot rest on the floor.

### **Guidelines for Workstations**

Correct workstation height depends upon the user, the chair, and other factors that interact with the user and work surface. The ideal is for the user to be able to sit or stand at the workstation with keyboard in place and easily maintain a 90-100 degree elbow angle and straight wrists while keying/typing. Adjustable height keyboard support should adjust between 23-28" to accommodate most users (26" is a good compromise position while leg clearance must still be considered).

Section 10, The Assignable Spaces, recommends Sit/Stand workstations for public desks, e.g. Circulation Desk **and** staff workstations.

Knee spaces should allow the user to feel un-crowded and allow changes of position even with keyboard support lowered to correct level. Knee space should be at least 30"W X 19"D X 27"H for compliance with ADA requirements. For a footrest, clearance **must** be calculated with legs in place on footrest. Depth of the "clearance envelope" for both legs and toes should be evaluated while the workstation user is in a normal working position at the workstation (determined by the design of the seating system and the way the user sits). Drawers and support legs (for furniture) should not go where human legs need to fit.

The workstation top should be of a size to allow space not only for all necessary equipment, but also for paperwork, books, and other materials needed while working. Working with materials on chairs and at odd angles has the potential for neck and other body strain. Items being used should be close to avoid long reaches. As a rule, the work area top should be at least as big as the standard office desk, 30"D by 60"W. A depth of at least 30" allows flexibility in use/reuse of the work area. Good wire/cable management may maximize usable space.

### **Monitor Checklist**

1. Top surface of keyboard space bar not longer than 2.5" above work surface.
2. During keyboard use, elbow forms an angle of 90-100 with upper arm almost vertical, wrist is relaxed and not bent, wrist rests are available.
3. Proper use for text entry, keyboard directly in front of user.
4. Proper use for data entry, keyboard directly in front of keying/typing hand.
5. Top of screen at eye level or slightly lower.
6. Viewing distance 18-24".
7. Screen free of glare or shadows.

8. Images on screen are sharp, easy to read, and do not flicker.

## **SIGNAGE AND GRAPHICS**

Graphic design, in terms of a signage system for both the interior and exterior, should be conceived and planned to announce the Library's resources and services. Signage should orient and guide people to all areas within the building. The designers should standardize the typeface for all signage. Signage must also comply with ADA guidelines for size, contrast, etc. In many cases, an alternative may be representational signage that uses pictures or symbols to convey an idea instead of, or in addition to, written words.

The wayfinding designer should consider signage that divides the information conveyed into three basic categories:

- Directional information to guide and direct people along routes to their destinations;
- Identification information to label destinations so people recognize them when they have arrived; and
- Instruction information to inform people about rules, restrictions, special conditions, and procedures.

The signage should be designed and installed so trained staff can make changes with ease over the life and purpose of the building. Electronic ink signage should be considered.

Regardless of the sign construction the language should be plain and easy to understand, as the illustration below for a law firm in a multi-story office building illustrates.



## **ACOUSTICAL TREATMENT**

Noise is a special concern. People of all ages will be using the various collections, seeking information, attending programs, visiting exhibits, and checking-out and returning library materials. Some customers will use the building for hours at a time while others will spend a brief amount of time in the facility. Some of the needs of customers include acoustical considerations. These can often be addressed by locating functions that require quiet concentration away from high-traffic or noisy areas.

A comprehensive program of acoustical design should conform to ASTM E1374 - 06 Standard Guide for Open Office Acoustics.

Ceiling systems are the primary means of absorbing unwanted sounds, followed closely by the type of lighting used. Ceiling-mounted fixtures with large flat lenses can bounce noise from one place to another.

### **Measuring Acoustical Properties**

It is commonly known the fundamental unit of measurement of sound is the decibel (dB). There are also three criteria commonly used for the measurement of noise or sound transmission in architecture. These are:

- Noise Reduction Criteria (NRC);
- Sound Transmission Class (STC); and
- Noise Criterion (NC).

Each has its particular purpose in specifying acoustical properties. In order to limit confusion, the programming consultant offers the following clarification, without an exhaustive discussion of the physics of sound, or the properties of sound transmission.

### **Noise Reduction Coefficient**

The NRC is a rating given to acoustical materials, for the purposes of comparing sound absorption of different commercial products. It is the most useful measurement of noise absorption. In exact terms, the NRC of a given building material is a measurement of the percentage of sound that is absorbed, and not reflected, by that material, averaged for the four most common audio frequencies, and expressed as a multiple of 0.05. As an example, a material with a NRC of 0.45 absorbs 45 percent of the sound that is incident upon its surface. Therefore, NRC ratings may range from 0.00, or totally reflective, to 1.00 or totally absorbent.

### **Sound Transmission Class**

This rating is substantially more complex than the NRC, and was devised to measure the sound transmission qualities of wall, ceiling, and floor construction assemblies

utilizing a collection of materials. Simply stated, the STC of wall assembly measures the average number of decibels lost (absorbed and/or reflected) when sound is transmitted from one side of the wall to the other. Therefore, the higher the STC rating of a partition, the better the noise control. An STC rating of 50 dB, roughly equivalent to the rating of a six-inch thick concrete wall, is considered very good.

An STC rating of 65 dB or higher is considered excellent. A rating of 70 dB would provide complete privacy, while a rating of 20 to 25 dB would provide little, if any, privacy. As expected, a higher STC rating usually equates to a more costly construction assembly.

Requirements for recommended STC ratings in libraries are provided in Table 1.

**Table 1**  
**STC Rating**

<i>space</i>	<i>rating</i>
Most Functions	STC 35
Office Areas	STC 40
Conference and Meeting Rooms	STC 50
Mechanical Equipment Rooms	STC 50

### **Noise Criterion**

This criterion measures the acceptable levels of background noise for a given activity. These numerical ratings are basically the sound level, in decibels, at the frequencies most audible to the average human ear. Through industry standards, NC ratings have been established for various activities. As an example, a NC of 10 dB is virtually inaudible. A NC range of 20 to 25 dB is suggested for sleeping in suburban or rural areas. The suggested range for background noise in libraries is 30 to 35 dB.

Background noise is often referred to as masking, or "white," noise. This low-level sound is desirable, if it is constant in nature and free of informational content, serving to mask other low level noises or sudden peaks in sound levels in a given space. For a space to have good acoustical qualities, it is generally considered to require some combination of acoustically absorbent construction and a level of background noise.

Background noise can be naturally generated from activities in the space, or it can be mechanically produced, as by an air conditioning system.

### **DOORS**

All interior doors between staff workspaces and public spaces, as well as all doors within staff workspaces, should have vision panels. All interior doors should have stops

and closure mechanisms.

## **ELECTRIC CLOCKS**

Consider digital clocks that provide the time in hours and seconds, as well as giving the reader the day of the month, the month, and the year.

Clock faces should be large enough to enable those standing 15 to 20 feet from the clock to be able to easily see the clock face.

Confer with Library staff regarding the placement of the clocks in both public and non-public spaces.

## **FLOOR LOADING CRITERIA**

The floor structure of the Library should be designed to support an uniform load of at least 125 pounds per square foot (psf) throughout the building.

## **FLOOR COVERING**

To ensure that products qualify as a green or environmentally friendly building material, the architects should evaluate each one before purchasing. The following questions should be asked and answered:

- Do the products have low volatile organic compounds (VOCs) to reduce harmful off gassing after installation?
- Are the products made from rapidly renewable and sustainable materials?
- Where were the products made?
- Were large amounts of natural resources consumed in shipping them to the final job site?
- Will the materials be durable enough to last at least as long as traditional flooring materials?

**Carpet** - Low VOC carpet is now more the norm than the exception. Recent studies that linked poor indoor air quality to health issues have pushed the carpet industry to find alternative and healthier adhesives and backing materials. The *Carpet and Rug Institute Green Label Program* (CRI) has established a rating system that sets standards for low VOCs.

Almost all carpet manufactured in the United States is made of nylon or olefin (polypropylene), and finding alternatives can be challenging. Wool carpets are a more organic choice, have attractive health and aesthetic attributes, and when properly maintained are as durable as synthetic carpets. However, for most libraries wool is cost-prohibitive.



A greener, more economical choice is recycled carpet. Though a somewhat limited market, recycled carpet is growing in favor and availability. Recycled content carpet fiber is made from used carpet, soda bottles, and other plastics. Manufacturers indicate it is more colorfast and durable than virgin fiber carpet. Priced about the same as first-run carpet, recycled carpet helps keep landfills free of the estimated five billion pounds of carpet that is replaced each year.

**Wood** - Hardwood floors are finding environmentally favorable options. Sustainable timber harvesting and processing, which often involves woods such as bamboo and eucalyptus, means that trees and the forest environment are managed in such a way as to not permanently damage the local eco-system. Even hardwoods that have a long growth period are now finding their way into the sustainable wood market.

Several organizations have started certification programs to mark wood products as being produced from sustainable forests. One such organization, the *Forest Stewardship Council*, offers a product search engine on their website, as well as LEED certification credits. Reclaimed wood from demolition, plantation-grown timber, and salvaged wood from land clearing and forest fires are fine sources for real wood floors.

**Linoleum** - Often confused with its ugly cousin vinyl flooring, linoleum is now an environmentally responsible flooring material. Made from rosin (tree sap), wood flour (reclaimed from lumber mills), cork flour (from sustainable cork tree bark), and linseed oil (pressed from flax plants), linoleum can satisfy almost all of the requirements for green products.

Because of the organic nature of the ingredients, linoleum will biodegrade in landfills without off gassing. It can also be burned in power-generating furnaces. Innovative styles in linoleum have also made installation easier. The new "click" system by *Forbo Flooring's* brand "Marmoleum" does not require any glue or adhesive. It works off a tongue and groove design. Some *Forbo* products apply credits to LEED certification in the materials and resources categories, as well as the indoor environment quality category.

### **Programming Consultant's Recommendation**

The adaptability required of the floor plan for the Searcy Public Library carries over to the floor finishes as well. The consultant strongly recommends re-cycled carpet tile as the dominant floor covering where carpet is called for, e.g. offices, public spaces, and workrooms. Consider the acoustical performance, wearing performance, color fastness, texture, fire resistance, non-allergenic qualities, and anti-static qualities of carpet tile.

Consider using hard flooring surface for the entrance lobby. Provide non-slip surfaces for all non-carpeted areas. Acoustics will need to be considered in these areas.

## WALL FINISHES

All wall finishes should be high quality, durable, washable paint. Also consider using heavy-duty wainscoting or other hard surface, with corner guards, for the areas of the building with high traffic of bulk materials. The architects and interior designer for the building are referred to the following publication:

- *Standard Design Criteria*, United States Postal Service, Facilities Department, latest edition.

The offices, workrooms, and Staff Room should have a tackable surface for mounting materials without damage to the wall.

Special consideration should be given to graffiti abatement.

## BOOKSTACK SHELVING

The Searcy Public Library will be a place for books and non-book materials. The space needed to house the print and non-print collections will likely consume 25 to 35 percent of the net assignable square footage (NASF). Therefore, the planning of bookstack areas is critical to the successful functioning of the facility.

For all of the bookstacks housing print-on-paper items, e.g. books, a book support should accompany each shelf.

All bookstacks in the public spaces should have end, or face, panels with flush-mounted label holders at each end of double-face ranges. All wall-mounted shelving shall have steel backs (in order to protect the walls and reduce the amount of re-painting of the walls). Selected end panels should be slatwall style to facilitate the merchandising of materials. Also, some of the panels will house stand-up for use PAC (public access catalog) stations. The Assignable Spaces (Section 10) will provide additional details for the location of the slatwall end panels and the PAC stations.

The Assignable Space section assumes the clear aisle space within the public accessible bookstack ranges will be a minimum of 42". This program recommends, however, 48" clear aisle for the most user-friendly library. The cross and end aisle space will be 48". These measurements will allow for easy access by people with disabilities.

All shelving must be designed and installed to meet the requirements of the seismic code of the greater White County area.

**Steel Bookstack Shelving** - Bracket or cantilevered steel shelving is the most widely used and universally satisfactory type of shelving for all types of libraries. It is the least expensive, most flexible, and most efficient shelving available in terms of having the

largest capacity and lightest weight. Choices exist in sizes, heights, finishes, and appearances such as closed-base, open-base, accessible-base for electrical and data outlets, T-base, and in accessories, including inserts to hold many types of material.

The shelving consists of slotted steel uprights or posts bolted or welded together and attached to top stretchers and bases to form a frame. Shelves, fitted with end brackets, are hooked into the slots in the uprights. Steel shelving with bolted frames requires sway braces, with turnbuckles for adjustment, in every fourth or fifth section to provide longitudinal stability. Welded frames, while usually more expensive, do not have a problem with longitudinal stability. The standard shelf length is 36". Most library building modules are designed for this length.

Heights vary from counter height at 42 to 48", medium height at 60 to 66", intermediate height at 72 to 78", to tall at 84 to 90". The most commonly used heights are:

- 45 or 48" with a base and two adjustable shelves per single face section (two base shelves and four adjustable shelves for a double-face section);
- 60 to 66" with a base shelf (or two) and four (or eight) adjustable shelves;
- 72"H with a base shelf (again, two base shelves) and four or five (eight or 10) adjustable shelves; and
- 84"H high with a base shelf (two base shelves) and five or six (10 or 12) adjustable shelves.

The tallest shelves, at 84 to 90"H, usually require stabilizing cross bars from one double-faced section to the next, or from a single-faced section to the wall. The intermediate 66"H or 72"H is the best height for a library that wants to be the truly user-friendly for the largest number of customers.

Nominal shelf depths are generally 8, 10, or 12", while the actual depths are one inch less. The "missing inch" is in the back of the shelf between the uprights. Shelf tops or canopies are normally installed on the counter height shelving. Backstops are recommended on all shelving to prevent books from falling between the uprights.

## **MERCHANDISING DECOR**

Portions of the public service areas such as new materials displays, exhibit spaces, and electronic media areas should be designed to incorporate some of the merchandising and display features and furnishings of a high-design retail outlet or bookstore. Shelving for books and other library materials, pamphlet holders, display and announcement boards, exhibit case areas, and public service counters and desks should attract customers and encourage browsing. The furniture and equipment selected for this area of the library must be compatible with the furniture and bookstacks used throughout the building.

## RESTROOMS

There **must** be good, clear visibility to entrances and exits of all public restrooms to facilitate staff monitoring of people entering and leaving the restrooms at all times. Provide acoustical treatment and adequate ventilation for all restrooms.

Public restrooms should include:

- Adult rooms per local code requirements;
- Children's room(s) with appropriate-sized elements; and
- Family assist room(s).

For space and cost saving a unisex restroom should be considered for the Children's restroom.

There should be Staff restrooms, preferably located close to the Staff Room. Include at least one, and preferably two, showers as part of the Staff restroom complex for the staff who ride a bicycle to work, walk a distance, or elect to walk or jog during their lunch/dinner break. Confer with Library Staff regarding having a unisex Staff restroom.

Surfaces should be of easily cleaned, graffiti resistant material. Toilet fixtures and accessories should be "hands free," stainless steel, vandal-resistant, and include:

- Wall-mounted water closets controlled by automatic sensors and water free urinals;
- Ceiling and wall mounted partitions with tamper-proof fasteners;
- Vandal-proof partition doors with coat hooks;
- A sloped floor with adequate drainage;
- Vandal-proof mirrors;
- Washbasins with automatic shut-off faucets set in enclosed cabinets for stability;
- A ledge, approximately 5"H and 8"D, placed below the mirror and between the washbasin and the mirror, for people to place books, etc. while washing their hands;
- A sturdy shelf in each water closet and above each urinal for placing items the customer may have;
- Foam or liquid soap dispensers (consider *AutoLoad*) located adjacent to washbasins so excess soap is discharged into the basin;
- Changing tables, or suitable counter areas away from the lavatories, with disposable diaper receptacles;
- Electric hand dryers; and
- Soap dispensers, electric hand dryers, and paper towel dispensers positioned for the physically challenged.

All restroom fixtures must comply with the Federal Energy Policy Act of 1992. Assure accessibility for use by people with disabilities, as outlined by applicable building codes, and the Americans with Disabilities Act of 1992.

Adult public restroom space should be designed in a manner that is similar to airport terminals. That is, no doors. This would **not** apply to the restrooms in the Children's Services area or the Family Assist restroom(s).

## **CUSTODIAL FACILITIES**

Provide a janitorial closet to store maintenance and cleaning supplies and equipment. The closet should include plumbing with a utility floor drain and a mop sink. Provide adequate venting and exhaust of cleaning solution fumes, mops, and cloths. Consider a 48 SF room with 9 to 12 linear feet of 24"D, 90"H, open storage shelving. Provide concrete or tile flooring. Provide adequate space for storage, taking into account clearance per code requirements for sensitive utilities and equipment.

## **SMOKING**

There will be a "no smoking" policy within the Library.

However, it is understood that there are/may be both customers and staff that wish to smoke. Therefore, an accommodation(s) outside the building needs to be provided. There are two challenges facing the architects. First, to provide a place(s) for customers and staff to smoke that does not present a visual or breathing barrier to the public and staff entering the building. Second, strive to provide for a separation of the staff who wish/need to smoke from the public who wish/need to smoke.

## **BUILDING MAINTENANCE**

Ease of maintenance should be a primary criteria of the design. If the building cannot be adequately and easily maintained, it should not be built.

General planning considerations include the following:

- Design external and internal window sills, ledges, and all other horizontal surfaces to minimize potential of catching dust;
- Attempt to eliminate corridors that have projections into them, and fountains in corridors should be avoided wherever possible;
- Where possible, mount toilet fixtures, drinking fountains, and other items on walls rather than on the floor;
- Where possible, provide round corners that do not present hazardous sharp edges;
- Avoid the use of ornamental brass or bronze hardware or trim that require excessive labor for cleaning and polishing and, If possible, utilize stainless steel or brushed aluminum;
- Utilize rubber or vinyl covered baseboards to provide a scuff-free surface and rounded joints which are easily cleaned and wear well;
- Provide adequate sources of both hot and cold water for custodial use;

- Locate light fixtures for easy lamp replacement;
- Optimize the use of vision glass in doors to limit unsightly smudges;
- Use paints that are durable and washable, or use other washable materials such as vinyl wall covering; and
- Use glazed or ceramic tile for fixture walls of the restrooms.

## **PREVENTIVE MAINTENANCE**

**Require** from all design engineers, contractors, and/or sub-contractors at least **three** copies of a preventive maintenance manual that provides a timetable for detailed maintenance for all mechanical and electrical equipment. These manuals should provide names, addresses, telephone numbers, and e-mail addresses of suppliers, parts manuals, etc. These maintenance manuals should also include timetables for care and cleaning of all building furniture, fixtures, and equipment surfaces.

Photograph all installations of wiring, plumbing, etc. that will be covered by flooring, or walls for expediting future repairs and changes. **Require three** sets of as-built drawings for all custom items and for the building wherever actual construction varies from the construction bid documents.

## **Finishes for Floor, Ceiling, and Wall Surfaces**

Provide stock, off-the-shelf and in-the-catalog products and finishes of the supplier or manufacturer. To facilitate patching and repairs, these stock items should include floor covering, wall covering, ceiling tiles, paints, stains, upholstery, fabrics, and plastic laminates.

## **Added or Attic Stock**

The Architects should attempt to use products and hardware that are standard and available locally, particularly for fuses, circuit breakers, sprinkler heads, and other hardware. For products sensitive to dye lots, manufacturing runs, etc. such as paint, floor coverings, ceiling tiles, and other finishes, the design team shall consult with the library's maintenance staff on quantities of added stock to be provided by these suppliers.

The architects should require, in the construction documents, that certain suppliers provide the owner with an added stock of their product for maintenance or repair. It is important to retain a stock of these materials from the same dye lot, manufacturing runs, etc., to insure proper matching.

Table 2 on the next page provides the items and suggested amounts that should be acquired and stored for use as needed.

**Table 2**  
**Added or Attic Stock Inventory**

<i>item</i>	<i>quantity</i>
Wall Covering	3 percent 3
Ceiling Tile	percent
Carpet	5 percent
Vinyl Composition Tile	3 percent
Ceramic Tile	5 percent
Fuses	1 for each installed
Breakers	5 percent of branch circuits
Paint	2 percent to 10 percent
Water Treatment	1-year supply
Air Filters	2 complete changes
Smoke or Heat Detectors	1 of each type
Fire Protection Sprinkler Heads	3 percent