



NATIONAL ENDOWMENT FOR THE

Humanities

DIVISION OF PRESERVATION AND ACCESS

## **Narrative Section of a Successful Application**

The attached document contains the grant narrative and selected portions of a previously funded grant application. It is not intended to serve as a model, but to give you a sense of how a successful application may be crafted. Every successful application is different, and each applicant is urged to prepare a proposal that reflects its unique project and aspirations. Prospective applicants should consult the Division of Preservation and Access application guidelines at <http://www.neh.gov/grants/preservation/sustaining-cultural-heritage-collections> for instructions. Applicants are also strongly encouraged to consult with the NEH Division of Preservation and Access staff well before a grant deadline.

Note: The attachment only contains the grant narrative and selected portions, not the entire funded application. In addition, certain portions may have been redacted to protect the privacy interests of an individual and/or to protect confidential commercial and financial information and/or to protect copyrighted materials.

Project Title: Creating a Sustainable and Energy Efficient Storage Space for Art and Artifacts of Western New York

Institution: Genesee Country Village and Museum

Project Director: Patricia M. Tice

Grant Program: Sustaining Cultural Heritage Collections

## Genesee Country Village & Museum

### 3. Narrative

#### Introduction:

GCV&M seeks \$400K to turn two galleries at the John L. Wehle Art Gallery (AG) into a safe, secure, energy-efficient, sustainable storage wing. This will provide the museum with its first collections storage facility and will significantly advance our ability to preserve the collections, as recommended by a 1998 IMLS *General Survey* undertaken by conservators Richard Kerschner and Ralph Wiegandt, and a 2006 NEH *Environmental Assessment of the Art Gallery and Carriage Museum* by conservator Barbara Moore (see Appendix 1). This project is GCV&M's highest collections care priority because, quite simply, without good storage, the museum cannot fulfill its mission or function properly as an institution. Lack of acceptable storage has bottlenecked operations, negatively impacting GCV&M's ability to care for existing collections, to acquire and refine collections, and to borrow artifacts for exhibition as the AG lacks a secure holding area and falls below accepted facility standards. Lack of storage has hindered implementation of our newly revised interpretive plan, developed under a 2004 IMLS grant, which calls for interpreting the second floor rooms of the Historic Village houses, and making them accessible for the first time. Many of these rooms, as well as an historic barn, are now inappropriately used for collections storage, making access to the collections virtually impossible for researchers and the public. The prime motivation for the project, however, is the fact that many objects are deteriorating due to the storage conditions. This project has therefore been given utmost priority by the museum's Board and administration because without a suitable storage area, GCV&M cannot achieve its mission to preserve its collections for future generations, nor can it accomplish its new interpretive plan.

#### Collections Overview:

The museum's holdings include an outstanding collection of sporting and wildlife art, a collection of portraiture, landscapes, genre, and still life representative of the popular art collected and appreciated by people living in western NY in the 19<sup>th</sup> century, a superlative 19<sup>th</sup> century clothing collection, important documentary artifacts and 3-D objects. Many of these objects are provenanced to western New York. All of these objects directly support GCV&M's mission and programming which includes gallery exhibitions, school lessons and outreach, adult education, special event weekends, and the living history experience that explores our cultural past. Recent programming themes have included changing interpretations of nature and land management as seen through art, the impact of the Civil War upon civilian life, a study of changing food customs, specifically the impact that widespread sugar production had upon American health and diet, and an exhibition that used clothing and art to examine accepted ideals of masculinity. We will treat rites of passages particular to women from cradle to grave next season. In the future, we will reinterpret a tenant house as representative of an African-American farmstead.

Our diverse collections invite an interdisciplinary approach to the investigation, analysis, synthesis and presentation of our historical and cultural heritage. The collections support humanities-related research, education and programming, particularly in the arts, history, and social studies relating to the settlement and development of 19<sup>th</sup> century America in general and western New York in particular. The preservation and interpretation of these collections is critical because GCV&M is the only major institution in our area that actively interprets, collects and preserves such artifacts. We are the keepers of our region's history, the "history place" for schools, and an important community partner for humanities-based programming which reaches diverse, and often, underserved rural and urban populations.

#### Institutional Profile:

Ranked the 3rd largest open air museum in the United States and the largest, most comprehensive living history museum in New York State, GCV&M maintains 68 historically significant structures,

relocated from thirteen surrounding counties to recreate a village setting at the museum. In addition, GCV&M operates an Art Gallery (AG) and a Nature Center located on its 700 acre campus. It serves adjacent rural counties, as well as the cities of Rochester and Buffalo with an annual visitation 125,000. The museum currently employs 32 full time staff, 17 part time staff, and 238 seasonal staff members, 550 volunteers, and has an annual operating budget of \$3,489,338. Our mission is to interpret and preserve objects that document 19<sup>th</sup> century life in western New York and America through its historic buildings, landscapes, art collections, and three-dimensional artifacts.

All acquisitions are overseen by the Collections Management Committee of the Board of Trustees, following staff review. Development in the collections is guided by our mission, a long-range interpretive plan, and the collections management policy. We are actively shaping our collections to better support our mission and areas of inquiry. For example, we have recently engaged to purchase the Susan Greene Clothing Collection, a stellar collection that will fill a long-standing gap in our own clothing collection and will foster new exhibitions, inform our historic costuming program, help build affiliations with other living history museums, and make us a center for 19<sup>th</sup> century clothing research.

## **2. Significance of the collections:**

The new storage facility will house our collections of fine arts, clothing and textiles, documentary artifacts, and 3-D objects:

**Fine Arts:** GCV&M owns 950 paintings, drawings, prints, and sculptures within the *sporting and wildlife art collections*. Hailed by *Wildlife Art Magazine* as “the premier public collection of sporting art in America and one of the finest of the world” and by artist Robert Bateman as “New York’s hidden treasure,” this collection dates between 1650-1985. These works represent leading American and European artists, serving as a veritable who’s who of the genres. (See Appendix 2 for artist list) Within this collection are notable subcollections, such as eight paintings by Swedish naturalist Bruno Liljefors, the largest collection of his work outside of Sweden. Liljefors is considered the most important wildlife artist of the late 19<sup>th</sup> century and a major influence upon American wildlife painters, including Carl Rungius and Bob Kuhn. There is also a superb sculpture collection with lifetime casts of Frederick Remington’s most popular sculptures, *The Broncho Buster*, *The Outlaw* and *The Rattlesnake*. These complement sculptures by Antoine Louis Barye, Isidore Bonheur, Pierre Jules Mene, Christopher Fratin, Charles Russell, Solon Borglum, as well as James Earl Fraser’s *End of the Trail*. Art historians have deemed *End of the Trail* and *Broncho-Buster* as America’s most popular sculptures of the 19<sup>th</sup> and early 20<sup>th</sup> centuries.

GCV&M’s sporting/wildlife art collection is the only one of its type in New York State. Indeed, there are only a handful of collections in the nation which are comparable. The Whitney Sporting Art Collection at Yale University Art Galley is the closest in scale, with 1,000 objects and the Yale Centre for British Art has strong holdings in British sporting art. Shelburne Museum, Burlington, VT, has an excellent but considerably smaller collection with approximately 150 British, American, and French works, while The Paul Mellon Collection of Sporting Art at the Virginia Museum of Fine Arts includes 42 British works. Both the Morris Museum, in Augusta, Georgia and Pebble Hill Plantation in Thomasville, Georgia include small but excellent collections of sporting art which focus primarily upon the Southern experience. The National Museum of Wildlife Art, Jackson Hole, WY has excellent examples of wildlife art, but does not collect sporting art.

In addition to sporting art, GCV&M’s collection contains a stellar group of paintings by the Taos Society of Artists who strove to create a truly American school of art and whose work helped shape America’s vision of the west. Included in this group are works by Robert Henri, John Sloan, Joseph Henry Sharp, Ernest Blumenschein, Oscar Berninghaus, Eanger Irving Couse, Lafayette Dixon, Walter Ufer, Ernest Jennings, Victor Higgins, and Frank Tenney Johnson.

These works benefit humanities research through their demonstration of the art historical, stylistic, and technical development and through the subject matter depicted. In the artwork, we see the evolving relationship between people and animals who were viewed as servants, friends, foe, and untamed symbols of nature. We see changing views of fashion, class, sports, leisure, evolving ideals and principles of land management and conservation, animal rights, the vision of the West, and the view of the Native American. Love, fear and fascination of Nature and wilderness are recurrent themes in American culture, one readily accessible through these collections.

GCV&M's *19<sup>th</sup> century art collection* includes approximately 200 paintings, drawings, prints, and assemblages. Fifty-three portraits bring visitors face to face with former residents of the region and invite us to think about family relationships, fashion, class, rites of passage, childhood and old age, ideals of beauty, value systems, gender roles, and how people wished to be viewed by others. Many of the paintings relate directly to the village structures, such as five MacKay family portraits (MacKay House), seven Brooks, Brown and Savage family portraits (Brooks Grove Church, Brooks Grove Post Office and Store). Other portraits relate to collection objects made or owned by the subject, (portrait of Ann Failing Brown and her exquisite 1870s quilt). These works document the artistic achievements of professionally and self-taught portraitists, including Ezra Ames, D. Brokow, Jonathon Buddington, Jerome Fielding, Deborah Goldsmith, Edwin Weyburn Goodwin, Milton Hopkins, Randall Palmer, Abraham Tuthill and as well as itinerant artists whose identities await discovery. We know from 19<sup>th</sup> century newspaper accounts that art exhibitions engaged area residents with paintings depicting landscape, religious subjects, and still life, and so these genres are also represented in the collection, both by amateur artists and by nationally-recognized local talent including Frank Eastman Jones and Helen Searle. These works often show us the prevailing tastes, aspirations and fashions which gave us our world today. Sometimes, this artwork shows us customs now obsolete, such as calligraphy artwork that includes an outstanding 8 x 3 foot banner by calligraphy teacher/artist William O. Place, created in 1858, Alfred, NY, and calligraphy by George Washington Eastman, father of George Eastman (Eastman's Boyhood Home) who included decorative writing in his business-school curriculum. Home-crafted art (wax and hair wreathes, scherenschnitte (cut paper), tinsel, sand, and embroidered pictures) contrast with mass-produced prints by lithographers Currier and Ives and other firms. Prints based on works by local artists (Joseph Young) depict the scenic and iconic views that defined our region. (Genesee Falls, Lake Ontario, Erie Canal, Portage Bridge, etc). GCV&M is the only area museum which regularly exhibits regional 19<sup>th</sup> century art. The collections of the Memorial Art Gallery of the University of Rochester span antiquity to contemporary art; the Albright Knox Art Gallery and Burchfield Penney, Buffalo, NY focus upon modern art. At GCV&M, we focus upon our art which was known and valued in western NY.

While founder John Wehle directed GCV&M, the AG exhibited only the Wehle art collections. With the professionalization of the staff in the last decade, however, the AG began mounting changing exhibits which included *Robert Bateman: A Retrospective* (2002), *Birds in Art* (2003), *About Face* (2003) *How Fetching! Dogs in Art* (2004), *Quilts Uncovered* (2005) *Happy Birthday GCV&M! 30 years of Collecting* (2006), *Sweet! Dessert in America* (2007), *Under Open Skies: Painting Nature Past and Present* (2008) and *The Sporting Life: Sport in Art and Fashion* (2009). Many of these exhibits resulted from community collaborations. The Genesee Valley Quilt Club helped mount and staff *Quilts Uncovered*, and with a local firm, sponsored "Quilt Day", a program featuring quilt historians who provided lectures on 19<sup>th</sup> century quilting and who identified quilts belonging to program participants. *Under Open Skies* juxtaposed 19<sup>th</sup> century and 21<sup>st</sup> century plein air painting, providing a place for The Genesee Valley Plein Air Painters to exhibit their work. This talented group also taught plein air painting classes outside the AG. More recently, the AG has attracted the Rochester Chapter of the Jane Austen Society of North America, which presented three lectures in the *Sporting Life* exhibit, melding art and literature together, exploring relationships between the landscapes portrayed in sporting art and Austen's views on the Enclosure Acts, male fashion, and upon animals as reflections of their owners. We have

sponsored other scholarly programming, such as the New York State Council for the Arts-funded symposium, *Artists of Western New York (2006)* where keynote speaker William Gertz analyzed the regional art traditions and where six curators from Buffalo and Rochester institutions presented current research on local artists to 102 participants. We accommodate advanced students studying botanical and illustration art at nearby Rochester Institute of Technology. Students routinely visit the art gallery to study wildlife art from Audubon to Zogbaum. Interior Design students visit GCV&M regularly as part of their history of design curriculum. Each March, Art Education Month, GCV&M sponsor a themed, student art show, offering a venue where student art can be proudly exhibited and viewed by students, their families, and the public. On a less formal level, we offer many collection-based “hands-on” crafts to our visitors. For example, this past season, visitors experienced painting with sponges, feathers and stencils, recreating the decorative painting documented on 19<sup>th</sup> century boxes on exhibit. We also offer spinning, weaving, dying, knitting, quilting, basket making, wood working, tin smithing, cooking, and pottery making. We anticipate extending art lessons in the 2010 season through GCV&M's Sampler program, *Art and Nature*, and through a new program where visitors will participate in creating “schoolgirl art” (watercolors, calligraphy, needle arts) in the 1855 Romulus Ladies' Seminary in the Village.

GCV&M has loaned works to regional and national museums, including New York State Museum, Albany, NY; Albany Museum of Art, Albany, NY; The Fraunces Tavern Museum, New York, NY; National Museum of Natural History, Washington, DC.; Abbey Aldrich Rockefeller Folk Art Museum, Colonial Williamsburg, VA; The Rockwell Museum, Corning, NY; The National Museum of Wildlife Art, Jackson Hole, WY; Joslyn Art Museum, Omaha, NB; San Diego Natural History Museum, San Diego, CA; Thomasville Cultural Center, Thomasville, GA; Wildlife Experience, Parker, CO; The McMichael Canadian Art Collection, Toronto, Ontario, Canada; The Dunnegan Gallery of Art, Bolivar, MO; Canton Museum of Art, Canton, OH; Bergstrom-Mahler Art Museum, Neenah, WI; R. W. Norton Art Gallery, Shreveport, LA; The Spartanburg Art Gallery, Spartanburg, SC; Elizabeth de C. Wilson Museum, Southern Vermont Arts Center, Manchester, VT and the Arizona-Sonora Desert Museum, Tucson, AZ. More local loans include the George Eastman House, Rochester Museum and Science Center, Memorial Art Gallery, Landmark Society of Western New York, Strong National Museum of Play (all Rochester, NY); Ontario County Historical Society, Canandaigua, NY; The Leroy Historical Society, LeRoy, NY; and The Batavia Land Office Museum, Batavia, NY.

GCV&M's art collections have been sought for books and exhibit catalogs which include David Wagner's *American Wildlife Art*, (2008), F. Turner Reuter's *A History of American Sporting and Wildlife Art* (2008), *Wild Life Art Magazine*, and exhibit catalogs including Sheila Hoffman's *Eanger Irving Couse, A Place in the Sun*. In 2006, GCV&M published its first exhibit catalog, *A Stitch in Time* by Elizabeth Davis, based on *Quilts Uncovered* although Victoria Schmidt, former AG curator, had presented an overview of the sporting art collection in 1984 in *Four Centuries of Sporting Art. The Eagle*, GCV&M's membership magazine, also features articles by staff members on the museum's collections. The museum has also been featured in *Americana* (1982) and *Early American Homes* (1997).

**Documents and family archives** illustrate the region's development. The Garbutt family papers (1813-1981) consists of approximately 130 documents, 1,250 store ledgers, papers and receipts which trace the history of the Garbutt Store, considered the best country store west of the Genesee River, from 1818-1910. (This store supplied local residents and settlers headed westward with foodstuffs, medicines, ready to wear shoes and clothing, tools, luxury and dry goods.) Also included are accounts of the Garbutt's plaster and grist mills, and Garbutt's Tailor Shop (now in Village.) The 47 letters between the Garbutt family and James Garbutt, the area's first Civil War volunteer and death, would provide excellent material for a doctoral dissertation. Garbutt's Bible, oil-cloth kit, and the home-made flag flown by the Garbutts during James' military service also reside in the collections. GCV&M also holds the Altay Store papers, which consist of over 500 papers and receipts dated 1851-1852 that document the wide array of goods sold or bartered at this country store, once located in Altay, NY (and now also in Village.) The

Altay and Garbutt store papers offer prospective researchers ample opportunity to compare and contrast rural commerce, folk and conventional medicine, and types of goods available to rural Americans in the 19<sup>th</sup> century, as well as the relationship between town and country merchants.

Written across five generations, 142 Peck-Jones-Gray family papers, dated 1823-1916, offer an intimate view into 19<sup>th</sup> century family life at the Jones Farmstead (now in Village). These papers are especially important because of the family's advocacy of women's rights, education, abolition and temperance. We also have the MacKay family archive with papers pertaining to the MacKay House (now in Village), and the Brooks family archive (Brook's Grove Church and Post Office now in Village) among which is a very significant hand drawn map, ca. 1822, depicting Haundenosaunee encampments and land owned by Mary Jemison, the White Woman of the Genesee. On the reverse of the map is a ca. 1818 transcription of the 1797 Gardeau Treaty attended by the Seneca leader Red Jacket and early settler Micah Brooks. Other family papers and diaries in the collections document emigration patterns, typically from the New England states to the Genesee Country from 1809-1886. Hundreds of agricultural posters and broadsides, maps, theater programs, certificates, scrapbooks, as well as account books from area trades and businesses, such as the 1858-1861 ledgers from a local blacksmith, further inform 19<sup>th</sup> century life. The Miller collections contains 800 ink-on-vellum architectural drawings made in the 1960s by historian James Miller, who studied most of the Greek Revival houses constructed in a 50-mile radius of Rochester, NY. Like our other collections, these artifacts hold ample opportunity for humanities research into art and architecture, private and social life, as well as business and commerce. The voices that reverberate through the letters, diaries, and journals of western New Yorkers resonate with visitors and researchers today.

**Textiles:** *Household Textiles:* This collection contains approximately 600 household textiles, consisting of 112 quilts made from 1780 through 1920, plus hand-spun and home-woven textiles (sheets, tablecloths and coverlets) provenanced to early settlers. These contrast with the commercially printed fabrics imported from England for use as furnishing and dress goods. Fifty-seven coverlets represent professional and amateur weavers working in western NY communities such as Wheatland and Rochester (Monroe County), Tyrone (Schuyler County), Perry (Wyoming County), Palmyra (Wayne County), New Fane (Niagara County), Ithaca (Thompkins County), and Jefferson County, while eight coverlets made by the elusive craftsperson now known simply as the "Bethany weaver" of Bethany, NY, display patterns distinctive to Genesee County, NY. Many of these weavers were Scottish, Irish, and English immigrants who settled in western NY, some of whom also established a thriving carpet industry in Rochester, Palmyra, Ithaca, Geneva, Auburn, and East Bloomfield. GCV&M recently acquired 40 ingrain carpets, an inexpensive carpeting mass-produced for the middle and working class Americas between 1840 and 1910. Since ingrains were not durable or viewed as special, few are represented in museums. Bedding, window and door coverings, transportation accessories, food service, household accessories, as well as unique works such as samplers and embroideries give visitors a well-rounded look at the changing patterns of American home life and how it altered in response to the Industrial Revolution, growth of leisure time, rise of the middle class and, in western NY, the transformation which occurred after the wheat blight changed western NY from the nation's wheat belt into a dairy-based and cash crop economy.

*The Susan Greene Clothing Collection.* The purchase of this exemplary clothing collection has been approved by the Board of Trustees, and will be finalized on December 10, 2009<sup>1</sup>. This collection contains over 2,200 articles of apparel for men, women, and children, primarily from 1790-1860, with concentrations in the years 1800-1825, a period thinly represented in other costume collections. The collection is extremely complete, having both the main elements of dress as well as a wide array of

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<sup>1</sup> The Greene collection currently resides off-site with its founder, Susan Greene, Alfred Station, NY, until suitable housing becomes available at GCV&M.

accessories—hats, shoes, stockings, pocketbooks, cravats, underwear, etc. The collection is particularly strong in menswear clothing, an area often underrepresented as men's clothing typically tends to be used, discarded or simply ignored by collectors. While wedding and special occasion gowns abound, simple work shirts and frocks, great coats, and accessories worn by the average man are relatively rare. That said, there is a significant core of women's and children's clothing which reflect changes in fashion and fabrics. Most of the collection reflects middle class /average consumption, with a smaller number of high-end objects serving as comparison pieces.

The condition, variety, completeness, and rarity of this collection make it one of the best in the state, if not the nation. The Rochester Museum and Science Center, Rochester, NY, also has an excellent clothing collection. However, this collection has only been displayed in exhibits mounted by GCV&M because of that institution's strategic plan emphasizing science rather than local history. Historical clothing is extremely important for humanities research. Typically, anthropologists, curators, and cultural historians examine a culture through the lens of its food, shelter and clothing. GCV&M ably interprets shelter and food through its historic buildings and outstanding historical foodways programming, while the Greene clothing collection provides the third strong support for cultural studies. Clothing is particularly evocative, connecting visitors with these most personal of artifacts, so capable of sending cogent, unspoken messages about status, wealth, class, technology, and ironically, about both belonging and individuality. As noted previously, this collection is especially important for the study of male dress, gender roles, as well as identity, ethnicity, work, leisure, and mass consumer culture. Also notable is the variety of printed fabrics of the clothing documenting 19<sup>th</sup> century graphic design. Part of the Greene collection has been published in Susan Greene's forthcoming work, *Textiles for Early Victorian Clothing, 1850-1880*, which will be a great historical resource for the analysis of clothing and printed textiles. This collection is especially important to GCV&M because, as a living history museum, we costume our interpretive staff in reproductions of historic clothing. The Greene collection will guide this aspect of our interpretation. We anticipate reproducing selected garments, making authentic reproductions available to visitors who frequently express interest in experiencing 19<sup>th</sup> century dress first-hand.

**3-D Objects:** This collection represents the utilitarian and ornamental objects commonly used in western NY and American homes and shops from 1790-1900. Made from glass, ceramics, metal and wood, these objects include tablewares, tools, and equipment for food preservation, textile working, time-keeping, communication, woodworking, printing, advertising, musical instruments, medical care artifacts, product packages, and furniture. Significant subcollections include the pottery collection, which informs not only our understanding of the area's early crafts, but also GCV&M's historic foodways program. Reproductions of regional 19<sup>th</sup> century pottery are produced by the village potter and his apprentices at Flint Hill Pottery, the museum's traditional working pottery. GCV&M is the only museum in the US that regularly produces wood-fired salt-glazed stoneware. Pottery-making has a long tradition in western NY and the local Wilcox and Morganville potteries are well represented in the collections, as well as the work of other unidentified potters. Imported ceramics illuminate trade and distribution patterns between western New York, Europe, and the Far East. These objects show us images of heroes and heroines and subjects and events of import. A Staffordshire cup celebrates the opening of the Erie Canal; a glass pitcher commemorates Frederick Douglas. Household and shop furnishings, made out of once innovative materials such papier mache, cast iron, pressed glass, Britannia ware, as well as a plethora of patented objects, document new technologies and production systems. Lighting and time-keeping devices, household tools and equipment will also be stored in the new facility, along with selected furniture artifacts with original painted surfaces or upholstery.

*Musical instruments* form a small but tremendously important collection for our outstanding musical programming which actively promotes and preserves America's musical heritage. The instruments, which includes three Wight dulcimers made in South Alabama, NY, were the focus of study for renowned folk musician Mitzi Collins who teaches hammer dulcimer at the Eastman School of Music

and performs regularly at GCV&M. Ms. Collins is one of 100 musicians who take part each August in GCV&M's *Fiddler's Fair*, made possible in part by support from New York State Council for the Arts. *Fiddler's Fair* invites fiddlers and string instrument players of all ages and abilities to participate in a two-day extravaganza which features a "Rising Generation" segment promoting an intergenerational exchange between young and seasoned musicians, who pass along their experiences and insights, along with folk melodies, to the next generation. On a larger scale, GCV&M has staged free concerts by The Rochester Philharmonic Orchestra, led by Pops Conductor Jeff Tyzik who composed *The Pleasant Valley Suite* in honor of GCV&M's 25<sup>th</sup> anniversary.

In short, GCV&M's collections offer a wide and rich resource for humanities research and programming that accommodates diverse subjects and learning styles and experiences. The artwork, textiles, documentary collections, and 3-D objects, which are the focus of this project, serve as primary source materials for programming aimed at serious and causal learners on topics that include, but are not limited to: agriculture, art, childhood, class, civics, communication, craft, diversity, education, entertainment, ethnicity, family life, fashion, food-ways, gender, health and medicine, history, holidays, humor, immigration, industrialization, literature, music, patriotism, reform movements (temperance, abolition, suffrage), religion, rites of passage, spiritualism, sports, technology, and its effects on rural and small town life, trade, transportation, travel and war. Our collections and historic buildings—our largest artifacts—provide a rare historical context for visitors and, also, film and TV media. The following documentaries were filmed at GCV&M using our structures and selected objects: *Signs of the Times*, (an award-winning history of baseball, narrated by Richard Dreyfuss), *Songs of Freedom*, (based on a companion book by David Marshall and Coretta Scott King about an African-American girl and her family who passed through western New York on their underground railroad journey to freedom in Canada), *Over the River...the Life of Lydia Maria Child, Abolitionist for Freedom*, (2007 documentary exploring the first Civil Rights movement, narrated by Diahann Carroll), *Nicolas of Myra: The Story of Saint Nicolas*, (documentary behind the legend of St. Nicolas and Santa Claus). In 2006, GCV&M partnered with the local public broadcasting station, WXXI, participating in the IMLS-funded Home-Work Hotline, addressing history-related questions posed by area students. Each February, GCV&M hosts regional competitions for students in six surrounding counties for New York History Day. During spring and fall, staff welcomes over 28,000 school students and home-schoolers. For schools unable to bring students to our site, our Moveable Museum, a collections-based program, takes selected artifacts into the schools. Additionally, GCV&M offers several day-long workshops for teachers to promote learning through material culture. For audiences between ages 4-18, GCV&M offers collections- and experienced-based Sampler programs, which immerse students in specific aspects of 19<sup>th</sup> century life including fashion, architecture, art, food preservation, civil war soldiering, spinning and weaving, needlecrafts, and tinsmithing. The collections also serve as a springboard for life-long learning through lecture programs, exhibitions, and adult education classes.

## **Current Conditions**

**Environmental conditions; storage methods; and preventive policies and systems:** At the time of its inception in 1966, GCV&M lacked professional staff. Its founder, John L. Wehle, believed that a very small collections storage area would suffice, as virtually the entire collection of art and artifacts was on display, either in the historic buildings or in the AG. Over the years, the collections have grown enormously in both size and significance, now numbering over 20,000 objects and 1,150 works of art. Despite this growth, GCV&M has remained without a secure, centralized collections storage room, while a barn and rooms on the upper floors of historic Village houses were pressed into service as "interim" storage spaces. As a result of this legacy, the stored collections are currently dispersed among ten separate buildings on the museum's campus, which are described in detail below. In every case, collections suffer from crowded and incorrect physical storage methods and are exposed to uncontrolled environmental extremes that jeopardize their long-term preservation – sustained damp, dust, light, as well as risks of

assorted potential hazards from events such as pipe or roof leaks or fire. Moreover, in these circumstances the collections are difficult to access and organize, and security is generally poor.

GCV&M has three classes of collections storage. The majority of *the historic collections* (furniture, pottery, glass, and tools) are stored in a barn and in selected rooms on the second floors of seven of the historic Village houses. None of these spaces are protected by intruder alarms or fire suppression systems, and are only minimally environmentally controlled with a (perhaps counter-productive) small amount of winter heat. Upstate New York experiences very cold temperatures in winter, with very low relative humidity (RH), followed by cool, damp spring weather. Summers can be hot and humid. Reflecting this climate, temperatures in these spaces reach the 90's F. on hot summer days and the RH, which dips into the 20's or below in winter, is frequently in the 70's and even the 80's in spring and summer. Neither the "interim" storage spaces in Village houses nor the "storage barn" are equipped with any kind of storage equipment beyond some office-quality shelving, so objects sit on open shelves (wood, metal) and on the floor. Pest control is problematic, as is security and dust control. Access is cumbersome. In addition, space is inappropriately occupied that otherwise would be used for exhibition and programming (see Appendix 3, images 1-3).

The Museum's *textile collection* is stored in the basement of the visitor's reception building, below the museum shop and public restrooms. This storage room is constructed out of plywood to sequester the collections from the museum shop's adjacent inventory of gift ware and food stuffs, a very undesirable pairing. Every effort has been made to house these fragile collections materials correctly in acid-free boxes and on Mylar-covered (acidic) tubes (see Appendix 3, images 4-6). However, the collection is seriously overcrowded, and the environmental conditions in this space are entirely unacceptable, the RH often exceeding 70% for sustained periods of time. As a result, mold is evident on some surfaces and the room as a whole exudes a musty odor. Textiles have also been damaged by water leaks from the facilities above: a magnificent trapunto quilt, donated in mint condition, was heavily stained when water leaked into the textile storage area from above. (Polyethylene sheeting is now in place in an effort to avoid a repeat of this incident.)

The AG, constructed in 1966, unfortunately also provides poor conditions for the *fine arts collections* exhibited and stored there. The building has a history of land drainage issues that have, on a number of occasions, caused flooding on the floor of the lobby and one of the exhibition galleries. (These exterior drainage issues are now being resolved through installation of a new storm drainage system around the foundations of the building that removes the surface water from the ground, and new gutters which empty into this new storm drain system funded by a grant from the New York State Council for the Arts.)

The building's original insulation provides poor coverage in the roof and is unevenly applied in walls from one part of the building to another. (The inadequacy of this insulation and our inability to moderate the environment to avoid extremes was dramatically demonstrated one winter when the curator discovered that a painting had frozen to the wall behind it.) The small fine arts storage room in the AG has additional problems. The 35-year old humidification and air conditioning unit located in the storage space itself compromises both security and the environment (see Appendix 3, image 7). Although the facility is equipped with a centrally reporting intruder alarm, smoke and heat alarms, the storage room features a pair of double doors that lead directly to the exterior. These doors were sealed and blocked following the conservator's 2006 report, but we are aware that they remain a weakness in our security. The ineffectiveness and inefficiency of the HVAC system and the lack of a dehumidifier on the system is reflected in the wildly erratic and inappropriate temperature and RH readings experienced in this storage room, and throughout the building, with summer temperatures over 80<sup>0</sup>F and RHs ranging from 21-88% in the course of the last year. Existing storage equipment is insufficient, crowded, and does not meet the needs of the fine arts collection: paintings and framed prints rest on their frames in overcrowded plywood

cubbies, heavy metal and stone sculptures reside within flimsy office-grade storage cabinets and shelving dating from the 1950's, and some larger items are, of necessity, inappropriately located in the aisles (see Appendix 3, image 8-9).

**Administrative and intellectual control of the collections and their relocation:** Control of the collections is guided by our Long-range Collections Care Plan and our Collection Management Plan. Paper records are stored in fire-proof file cabinets. Our Collection Management Plan provides for access to the collections by scholarly researchers and also by interested members of the public. The museum employs a full-time registrar who manages collections records and enters collection-related data into PastPerfect, the museum's cataloguing software program. Approximately 80% of the collection is currently entered on the database, and we are steadily reaching our goal of 100%.

We currently maintain up-to-date location records on our data-base whenever collections are moved. During this project, we will first be removing collections from the spaces that will be renovated, and we will track new locations as objects are moved. We anticipate that the installation of our collections into the new storage area will serve as a checking point for our catalogue records, enabling us to identify uncatalogued objects and update all location records. (We are not requesting grant support for this important element of the project, which will be carried out by our registrar.)

## **History of the project**

**Preservation Challenge:** Our challenge is to create a sustainable, energy-efficient storage area to economically and safely house and preserve the museum's most fragile and historically significant collections. GCV&M's project team has worked together to bring results of the most recent research into re-evaluating the functional definition of a good preserving environment and has developed a plan that employs the principles of sustainable use of energy and materials to create such an environment. To carry this out we will renovate space in an existing building, rather than constructing new space and we will depend, in part, on the stabilizing effect of the earth itself to control the storage environment. This will allow us to utilize simple equipment with exceptionally low energy requirements, minimizing both operation and maintenance costs to maintain a stable environment despite the regular power cuts that our rural site regularly experiences.

**Previous Preservation Actions, Studies, and Project Rationale:** For most of its 42-year history, the GCV&M was run by its founder, and then by a well-meaning and enthusiastic team of individuals interested in educating the public in the history of the region. During this time, the museum confirmed its place as an important regional resource for families, schools, and scholars and won the interest and loyalty of the public. During this time, also, the collections grew far beyond expectation in size and importance. The GCV&M made steady efforts over these years to improve collections care. We actively maintain our historic houses, acting on the advice of preservation architects and conservators. Following an IMLS funded conservation report on our historic Village houses by Richard Kerschner and Ralph Wiegandt (1998); many windows in the houses have been provided with UV filters and light-reducing curtains. Because the environment in the Village structures is difficult to control, staff has replaced historic quilts on exhibit in the houses with reproductions. (These quilts and other textiles were packed in acid free boxes, but are stored in a damp basement, as no better alternative space exists. As this experience demonstrates, the effectiveness of our efforts has been severely limited by the lack of a proper storage facility!) Most of the framed artworks on paper and photographs in the Village houses have also been replaced with facsimiles, and all will have been replaced by the spring of 2010. Following the recommendations of the NEH-funded study of the Art Gallery by Barbara Moore (2006), staff removed hazardous materials from the small AG storage area, padded storage cubbies and floors used for painting storage, separated paintings with archival board, and introduced UV filters on fluorescent lights. We have purchased HOBOT monitors (Onset) and two PEM monitors (Image Permanence Institute, RIT) to better

establish our existing environmental conditions. (These will continue to be used to monitor conditions in our new storage spaces.) An integrated pest monitoring program utilizing sticky traps inspected monthly by a pest control service has been implemented in the Village houses and in the AG, as well as the storage barn and textile storage room. Finally, an IMLS Conservation Project Support Grant allowed the AG to hire Westlake Conservation to survey, photograph and write condition reports on 137 paintings. Subsequently, prints were removed from acidic framing and placed in acid-free boxes and several art works at risk have been conserved.

The improvements in collections care detailed above were all useful, but tended to be piecemeal because resources were limited and, truthfully, previous administrations stressed educational programming to the detriment of collections care. We therefore lacked the administrative and financial support required to carry out a comprehensive long-range collections care plan.

With the appointment of our new administration in 2007, emphasis has been placed on preservation. President and CEO Peter S. Arnold, with the full support of the Board of Trustees, have made collections care a priority, and GCV&M is fully committed to offering the professional stewardship our collections deserve. Acting on recommendations in the 1998 and 2006 assessment reports, President Arnold directed staff and consultants to develop a long-range plan to serve as a blueprint for systematic, efficient, and sustainable improvements in all aspects of collections care (see Appendix 4, Long-range Collections Care Plan). President Arnold also initiated an ongoing assessment of the historic structures, and major improvements have been carried out based on their findings including re-roofing and storm water management. (Twenty-eight buildings have been surveyed to date; seven more will be studied late fall and early winter 2009 – 2010.)

The Landmark Preservation Group produced a study of the Art Gallery in 1998 (*Existing Climate Control System Assessment*), followed by Barbara Moore's report detailing poor preservation conditions in the AG, including water penetrations, and poorly controlled interior temperature and humidity. Responding to a general perception the building was poorly constructed, GCV&M needed to determine if the building could be salvaged for its intended function. An "*Evaluation and Planning Report*" in 2008 by Bero Architecture determined the building was structurally sound, but cost-saving measures taken during the original construction made improvements necessary to upgrade the building to provide a suitable interior environment.

Both the 1998 IMLS review of the Village houses and the 2006 NEH assessment of the Art Gallery and Carriage Museum cite our lack of dedicated storage space to house the collections, our inability to maintain, in any location, a storage environment that does not jeopardize the long-term preservation of our collections, and our complete lack of storage equipment suited to the physical needs of our collections. Both studies recommend, as a priority, that we create a museum-quality storage area to preserve the collections. The "*Evaluation and Planning Report*" (see Appendix 1, Supporting Reports) by Bero Architects laid out the building's many problems – poor drainage of surface runoff, an inadequate storm water collection and disposal, lack of vapor retarders, minimal insulation, poorly balanced and controlled HVAC, absence of a fire suppression system, and direct access between boiler room and collections storage. The Bero report concluded, however, that despite these serious problems, the fire-resistant building was fundamentally sound and could be rehabilitated, at reasonable cost, to provide a safe environment for the collections.

The President and staff presented these assessments to the Board of Trustees who were galvanized into action by several factors. The first was conservator Moore's statement in her report that the AG "...is no longer doing a good job of preserving the collections that are exhibited and stored there." With preservation and stewardship as the museum's core values, trustees had long assumed that collections received appropriate care. The fact that the contrary was true disconcerted many. President

Arnold toured trustees through the AG, the textile storage room, and other storage areas. After seeing storage conditions firsthand, the Board readily supported President Arnold's proposal to thoroughly upgrade the AG and its HVAC system, and to create within it a centralized museum-quality storage area equipped with a mobile storage system. This project, which will provide appropriate physical storage for the collections in a secure and sustainably controlled space, will be nothing short of transformational.

As we considered how best to carry out this far-reaching project, we assembled a planning team consisting of an architectural firm knowledgeable about the AG and conversant with the environmental needs of museums (John Page and John Bero, Bero Architecture PLLC); an experienced HVAC engineer committed to the investigation of sustainable solutions for museum storage (Lawrence Smith); a conservator familiar with our collections and experienced in planning storage facilities (Barbara Moore); and two GCV&M staff members, Senior Facilities Manager Edward Coons and Curator Patricia Tice. Our planning team has collaborated to evaluate approaches and options that will allow us to create a good preservation environment in the AG that will suit the needs of our diverse collections and, at the same time, maximize energy efficiency, and represent a realistic and sustainable use of our resources, now and in the future.

To develop the standards and solutions presented below, the team met with Professor James M. Reilly, Director of the Image Permanence Institute (IPI) at the Rochester Institute of Technology (RIT), to discuss our expectations in light of the extremes of temperature and RH experienced in upstate NY, to confirm our target environmental parameters considering the nature and environmental history of our collections, and to explore a wide variety of other technical and mechanical issues. Most helpful was his confirmation, based on his extensive research and experience in collections care, that seasonal variations in temperature and humidity are highly acceptable, provided extremes and rapid shifts are avoided, and his endorsement of the environmental parameters specified below.

Our design derived from an NEH-funded project, carried out by John Bero in 1995, to create a sustainable storage room using simple, uncomplicated equipment at the Susan B. Anthony house, Rochester, NY. This storage room, located in a historic house, was built without mechanical equipment. Conditions in the room have been monitored since that time, and HVAC equipment has never had to be added, because the room provides an excellent storage environment as it is. Utility costs and equipment maintenance costs are zero. The GCV&M project allows us to build on this work and expand it in a different direction, using natural forces to minimize utility costs. While experimental in nature, we are confident from other studies undertaken by John Bero that this approach will not only be successful for GCV&M, but will serve as a model for other institutions in a similar situation. As an additional outcome, we expect this project will directly benefit our public in a number of ways. Many of our visitors are enthusiastic collectors of antiques and stewards of their own collections or of objects related to their own families' histories. We see this project as an ideal opportunity to help them learn, in a variety of ways, to care for their own collections by applying the same principles used by museums. We will feature the new storage facility in our annual "Behind-the-Scenes" tour of the museum for the public during the move, on completion of the project, and thereafter. The museum has just debuted a new web site, and we will dedicate a page to this project.

## 5. Methods and standards

**Current and Expected Conditions:** As described above, environmental conditions in our present storage areas are unacceptable. In the AG, the focus of this project, temperatures during the previous year reached a high of 88<sup>0</sup>F with an RH of 76% one summer day and a low of 41<sup>0</sup>F (when the HVAC system broke down in winter) with an RH of 21%. These problems are largely caused by lack of proper insulation, vapor barriers and an ineffective and unreliable HVAC system.

Our planning team, in consultation with James Reilly, has defined what we believe to be safe environmental parameters for our collections based on our research carried out by the IPI, the Canadian Conservation Institute and the Conservation Analytical Laboratory of the Smithsonian Institution (see attached bibliography). We plan to maintain the relative humidity between 35% and 55% with the temperature at or below 70<sup>o</sup>F in summer, dropping to the mid-50's F in winter. The transition from summer to winter conditions will be adjusted gradually.

We are aware that maintaining these conditions in our storage spaces will require some behavioral modifications. For example, in winter, when the storage rooms are at 55<sup>o</sup>F, it will not be comfortable to work in them for extended periods of time. Also, when the storage rooms are significantly cooler than the remainder of the AG, it will be necessary to enclose objects in plastic before removing them from storage to allow acclimatization and avoid any possibility of condensation occurring. We do not expect these conditions to be unduly restricting, especially since the museum is closed to the public during coldest months so activity levels are lower, but we expect to have to make some adjustments.

We will create a white paper for the benefit of other museums detailing the methods, materials, and equipment we have used in this project, the results of these choices, and the lessons we have learned.

**Steps to Improve Conditions and Justification of Methods and Procedures:** The “greenest” building is the one which is already standing. In the case of the AG, the building itself has been determined to be sound. However, as mentioned previously, certain faults have rendered it unsuitable for museum collections. These include improper grading and drainage, poor insulation, lack of a vapor barrier, unreliable electric supply, and an antiquated HVAC system that lacks the capacity for dehumidification needed in upstate NY. Additionally, the lack of proper collections storage equipment and a secure, dedicated storage space has long inhibited collections care and growth. While the philosophy and certain elements of the systems we propose have been tested elsewhere (notably at the Shelburne Museum and in Denmark), the climate in upstate NY, the nature and history of our collections, and the performance of our building are unique. The strategies we have adopted therefore differ in certain respects from those of other institutions, and could be considered somewhat experimental. However, we are confident that our choices represent a logical and reasonable approach founded in established engineering principles and past experience. In the event that the environment in the rooms varies from our goals, however, the architect and engineer have made provisions for additional HVAC equipment to be added, if required.

Proposed building improvements have been selected to support the project goal of providing environmentally sound collection storage relying primarily on passive methods of environmental control, with an improved insulated envelope, and an interior concrete mass. Passive methods will be supplemented with simple, low energy equipment sufficient to maintain target relative humidity and temperature conditions.

*Building Envelope: Floor* The existing concrete slab-on-grade floors in the two designated storage rooms were not built to support the weight of a mobile storage system and were not installed with a vapor retarder. Floors will be removed, crushed, and used for granular fill on this project and other projects in the Village. This will give us the opportunity to provide perimeter foundation insulation and a sub-floor polyethylene vapor retarder beneath a new reinforced concrete slab. The new concrete slab will be recessed to receive storage equipment rails. Epoxy concrete topping will be added to level the floor with the storage equipment rails and provide a durable finish. Insulation will not be provided beneath the floor to permit the mass of the earth to remain thermodynamically coupled to the space. The mass of the rooms will thus be increased to reduce peak summer temperatures. In the design, the earth beneath the building is utilized as a heat sink, assisting summer cooling.

*Building Envelope: Walls* The existing exterior walls consist of concrete masonry units (CMUs), centered between interior and exterior furred wall cavities. Interior cavities have rigid insulation at most locations and are finished with a ¾ inch plaster system. Exterior cavities are empty and finished with wood board-and-batten siding. These walls are under-insulated (total wall R=10+/-), and lack air barriers and vapor retarders. The CMUs are fire resistant and provide mass, but the mass is poorly utilized because the wall is under-insulated.

In order to improve wall insulation and include mass of the CMUs within the conditioned envelope, we are planning to insulate the existing exterior cavity with dense-packed cellulose blown in under high pressure (improving to a total wall R=22). This natural product is composed of 83% recycled material, with borates added to render it fire retardant, mold inhibiting, and insect repellent. Cellulose installed in this way acts as a vapor retarder. To accommodate the installation, we will remove, salvage, and reinstall the existing board-and-batten wood siding. Tyvek building wrap will be installed between the exterior insulation and the salvaged board siding to provide an air barrier. This system will permit the existing interior furring, insulation, and plaster to be salvaged and reused without disturbance; it will be restored as required.

We are investigating the feasibility of increasing the mass of the CMU walls by filling the walls solid which will significantly add to the room's mass. While the exterior siding is off, cores can be accessed by removing the outer wythe of the upper CMU and pumping a grout slurry into the open cores. Filling the cores of the CMUs will add significantly to the rooms' mass.

The West Storage Room now has an egress door and small wooden shed covering exterior concrete stairs and retaining walls. The shed and walls have significantly deteriorated, and the egress door will no longer be required when use of the room is changed from public space to storage. The exterior egress door, wooden shed and retaining walls will therefore be removed and the door opening filled in to match the finished wall construction.

*Building Envelope: Ceiling/Roof* Existing roof construction consists of metal bar joists supported by steel ridge beams and perimeter CMU walls. Bar joists support steel roof decking, OSB underlayment, and asphalt shingles. Attic ventilation is adequate. The existing ceiling is standard 2 x 4 suspended acoustical tile. Three inches of fiberglass insulation (R=11), is loose-laid on the suspended acoustical tile, parallel with structural tees. Ceiling suspension wires and recessed lights create gaps in the insulation. Insulated ductwork is located in unconditioned space above the ceiling. Ceiling insulation is less than adequate thickness and loses significant additional heat to air infiltration through the poorly fitted tile and gaps in the insulation.

The existing suspended ceiling, fiberglass insulation, recessed lights, and ductwork will be removed from the two rooms and support spaces, and salvaged for Gallery repairs and reuse in other modern buildings in the Village. A structural ceiling will be installed consisting of light gauge metal joists supporting 5/8 inch fire-rated gypsum drywall and 12 inches of dense-packed cellulose (R=40), creating a well-vented attic sealed against infiltration from the rooms below. Dense-packed cellulose will double as air barrier and vapor retarder. No penetrations through the ceiling system will be made. Lights and ductwork will be located below the ceiling. Attic access will be through existing gable end wall vents.

*HVAC Equipment:* The existing HVAC equipment is 33 years old, and not equipped to provide separate control of the future storage rooms, and inappropriate for the passively tempered rooms being proposed. These storage rooms will be segregated from the existing HVAC equipment and provided with new equipment. Each storage room will have a dedicated heating, cooling, and humidity control system. For cooling, 3/4- to 1-ton ductless split heat pump systems will be used. Air-handling units will be wall hung,

and outdoor condensers will be located on pads adjacent to storage room walls. Air-handling units will have condensate pumps to pump condensate to a sanitary drain. Heat pump units will be intentionally undersized so they run continuously during the hottest weather to maintain improved humidity control. Although every effort will be employed to isolate the rooms from outdoor air and moisture conditions, minor infiltration is expected from outside and from public areas of the museum, so small commercial-quality humidifiers and dehumidifiers will be required to maintain targeted levels of relative humidity within each storage room. Ducted wall-hung steam humidifiers will be installed in the mechanical room to add moisture to the air during cold dry weather.

Each room will have four small in-line fans (one in each corner) that will run continuously. Each will draw about 126 cfm of room air from the ceiling and direct it to the floor. Storage units will be mounted a small distance away from walls to eliminate stagnant air and allow continuous air movement throughout the room to maintain uniform humidities and temperatures at all levels.

Ductless heat pump systems will provide cooling as needed and some of the heat required in the rooms. The type of system will provide about 3 KW of heating which will be adequate until outside temperatures drop below 40<sup>0</sup> F. When the outside temperature drops below 40<sup>0</sup> F, a supplemental heating system is required, therefore, each room will have a separate 10 KW cabinet heater that will handle the lower outside conditions and provide backup heat in the event other systems in the room are not operating.

A small Direct Digital Control System (DDC) is planned to control all heating, cooling, and humidification systems, so that conflicting systems will not operate simultaneously (i.e., heating and cooling at the same time). It is likely that one DDC system will be able to control both rooms.

By using passive measures: improved insulation, enclosed thermal mass, and vapor and infiltration retarders, we will significantly reduce winter heat and summer cooling loads, maintaining target relative humidity and temperatures with minor support using simple equipment with low energy and maintenance requirements.

*Electrical:* A new, 200-amp., 120/208-volt, 3-phase electrical panel and power transformer will be installed in the new mechanical room between the two storage rooms. Power will be distributed to convenience outlets, lights, air conditioning equipment, humidifiers, dehumidifiers, and fire protection systems for each room.

*Plumbing:* Plumbing will be required to accommodate new equipment and fixtures. Sanitary floor drains with trap primers will be provided for each storage room to handle condensate drainage from the ductless air-handling unit, blow down from the steam humidifier, and condensate from the dehumidifier. All piping in storage rooms will be wall-mounted; no piping will be located overhead and no pressurized piping will be located in storage rooms. Domestic cold water will be piped to each of the two humidifier units and they will be located in the mechanical room.

*Building Equilibrium:* Concrete slabs and wall grout will require lengthy curing times. Because of improved vapor retarders and air barriers, and even with temporary forced ventilation, it is anticipated storage spaces will require several months to reach equilibrium of relative humidity. Storage spaces will be monitored and the collection will be moved in only after the environment is stabilized within target environmental ranges. Our engineer estimates this will require about three months.

For wall and ceiling upgrades please refer to the drawings in Appendix 9 for drawings of wall and ceiling upgrades, mechanical equipment and electrical improvements.

**Procedures and staffing related to the provision of appropriate environments:** GCV&M has a Facilities and Operations staff responsible for monitoring equipment performance on a regularly established schedule. The Senior Director for Facilities and Grounds has established a flow chart for regular maintenance of all our equipment, as well as for emergency procedures in the event of a systems malfunction.

**Plan for ongoing maintenance of collections:** Due to the scale of the project, the AG will be temporarily closed and used as a temporary storage and staging area for the collection move. We will erect shelving in the AG's east wing. Collections from the west wing will be relocated in the east wing, and collections stored in other buildings throughout the campus will be relocated to the AG where they will be prepared for installation in the new storage system. The existing HVAC system will continue to function during this period and will provide the same environment, or better, than these collections are currently exposed to. (Note: Art-related programming will be conducted at the Ladies Seminary in the Village.) The details for the planned move and preparation of the collections will be discussed fully below in the Work Plan.

**Improvements in Security, Fire Protection and Lighting:** This project provides us with the long-awaited opportunity to upgrade security, fire and lighting systems.

*Security:* Existing exterior doors in storage rooms will be eliminated. Each storage room will be accessed through a single interior door only. Our centrally-reporting intruder alarm will be upgraded so that a personal code, as well as a key, is required to enter the storage rooms.

*Fire:* The existing facility has a fire detection system that reports to a central station, as well as to the museum's own 24/7 security staff. This system will be greatly enhanced as a part of this project with up-to-date equipment and reporting. Each storage room will be equipped with dedicated photo- and ion-type smoke detector units which will tie into a new central fire alarm system, with notification to the fire department by a central station monitoring service. In addition, there will be audible alarms and strobes to signal building evacuation to public and staff. Manual pull activation stations and manual abort stations will also be provided.

The AG does not have a fire suppression system due to the absence of a suitable water line. During this project, we plan to install an independent Clean Agent Gas Fire Suppression system in each storage room. The systems will discharge inert gas that has no residue and will not harm stored items. Occupants who may inhale the gas upon discharge will not be harmed and will have sufficient time to leave a room without injury.

*Lighting:* Existing lighting in the two rooms consists of recessed incandescent can lights and incandescent track lighting. This lighting is inappropriate and inefficient. Existing lighting fixtures, controls, and wiring will be removed and salvaged for repairs and spares for systems remaining in other spaces. Low-level lighting will be provided in each storage room. Twelve single-tube fluorescent light fixtures with 32 watt, T8 lamps, and electronic ballasts will be installed on the ceiling of each storage room. Fixtures will have wrap-around acrylic lenses to protect stored items from ultraviolet light exposure. Lighting levels in the storage rooms will be about 5-7 foot-candles at floor level and about 19-20 foot-candles at ceilings.

Lights in each storage room will be controlled by six switches so that small sections of the room can be illuminated separately. For safety reasons, lights will not be controlled by motion detectors because there are no windows to provide natural lighting and a person could be injured while working around racks of stored items without adequate lighting. There will also be exit and emergency lights in each room.

**Ongoing Management and Monitoring of Conditions:** We are currently monitoring both future storage spaces, as well as the portion of the AG unaffected by this project, using our four HOBO monitors and two PEM monitors. When the project is complete, we will continuously monitor environmental conditions in these spaces. In this way we will gauge performance, so that any necessary adjustments can be made. In the longer term, when the renovation of the entire AG is complete, we will employ real-time direct monitoring control with automatic alarms which will alert staff if conditions move outside acceptable limits. Energy consumption in the two storage areas will be measured separately from the remainder of the building and will be reported in our white paper.

**Storage Planning:** Curator Patricia Tice and conservator Barbara Moore conducted a detailed Space Needs Survey of the collections housed in each of the ten current storage locations to determine the storage requirements of the different classes of objects. In each space, items were reviewed to determine size, quantity, and the safest and most efficient storage method. For each of the collections, Moore developed a spreadsheet that detailed the storage equipment and the storage supplies needed to house the collections efficiently, but without undue crowding (See Appendix 10, Summary Needs Sheet.) Storage equipment suppliers have developed layouts which are subject to review and revision by the project team. (See preliminary lay out plan in Appendix 11.)

A mobile storage system will be installed by SpaceSaver, an industry leader with a record of quality and reliability. The mobile storage rails will be set in concrete during the course of the renovation. The storage equipment specified consists of a combination of SpaceSaver frames and shelves with Delta Designs trays. All components of this equipment will be constructed of powder coated steel. In general, large 3-dimensional objects such as furniture will be placed on standard powder-coated wide span shelving which, in turn, will be placed on mobile (manual) SpaceSaver carriages. Mid-sized sculptures will be stored on a shallower, non-mobile pallet rack system affixed to a wall. Large, heavy sculptures will be provided with powder-coated steel platforms with wheels which will take the place of the bottom shelves of this system. (See Appendix 13 for design). Small 3-dimensional items such as dinnerware and tools will be stored either on shelving or in trays within the mobile system. Large textiles and rugs will be rolled onto acid-free tubes, wrapped in a layer of Mylar, and supported on cantilever frames on mobile carriages. Clothing suitable for hanging will be hung on correctly-sized broad polypropylene hangers on rails of appropriate height within the mobile system, with shelving above to hold (acid-free) boxed textiles – quilts, articles of clothing not appropriate to hang, household textiles, and hats. Small textile items and accessories such as shoes, belts, and canes will be in powder-coated steel trays of varying depth. Trays will generally be lined with polyethylene foam and items in boxes will be padded out with/or layered with acid-free tissue or polyethylene fiber-stuffed stockinet rolls. The painting collection and other large hanging items (such as advertising signs) will be hung on mobile painting racks. Archival materials and works on paper will be placed in acid-free drop-front boxes with interleaving papers and, in some cases, acid-free mats. Oversized paper items will be placed, with interleaving and/or folders, in flat file drawers.

We have obtained three bids for mobile storage systems, but have chosen SpaceSaver to carry out this work, in part, because the company is committed to “green” production methods. Powder coating is a solvent-free process and surfaces are prepared for powder coating using recycled water rather than solvents. The steel that is used is approximately 97% recycled. And, of course, a mobile system that takes full advantage of our ceiling height makes the most efficient use of space possible, allowing significantly more objects to be fitted into our spaces than conventional storage equipment. This system will make the most efficient possible use of our conditioned space: SpaceSaver has calculated that this high density system will provide, in 1824 ft<sup>2</sup>, the same storage capacity as 3802 ft<sup>2</sup> of standard storage equipment.

## Work Plan

**Current Preparations (pre-grant):** Currently, we are addressing storm water management issues at their root cause. This work began October 1, supported in part by a grant from NY State Council for the Arts, and will be completed by December 15, 2009.

Due to the scale of the proposed renovation, we will close the building to the public for the duration of the project. This decision was taken to allow us to use the AG east wing, which will be unaffected by this stage of the renovations, as safe and secure temporary storage and as a staging area for the move of collections. Closing the AG will also free collections staff time to work on this project.

In preparation for the start of renovation work, museum staff will erect temporary shelving (from existing stock) in east wing of the AG. Staff will then de-install the artworks now located in the AG's west wing and relocate them to the east wing. This pre-grant work will be completed between March and June, 2010.

### **Activity 1: *Renovate the west wing of the Art Gallery (July 1, 2010 – November 30, 2010)***

*Responsible parties:* Contractors, architects, consulting engineer, and GCV&M Construction Project Manager Ed Coons, Project Director Patricia Tice.

The west wing renovation, as described above, will take place over a five-month period beginning July 1, 2010. Prior to initial demolition, temporary protections will be installed, sealing the construction area of the west wing off from the remainder of the AG. (which will otherwise remain as it is now, served by the same HVAC system). Flooring, carpeting, and mechanical and electrical equipment will be removed from the west wing; most will be salvaged. Concrete floor slabs will be removed and the concrete will be ground for reuse. Interior wall finishes will be preserved. Exterior siding will be removed and salvaged for reuse. Rehabilitation will proceed with new floor slabs, mechanical and electrical equipment, ceilings, and insulation.

Bero Architecture PLLC will prepare bidding documents in compliance with the Davis-Bacon Act and work with GCV&M Construction Project Manager Edward Coons to coordinate the bidding process for the rehabilitation work. Rehabilitation work will be carried out by the successful, qualified general construction company providing the low bid. Construction activities will be coordinated and administered by a team composed of Bero Architecture PLLC, the mechanical and electrical engineer, Larry Smith, and by the museum's Senior Facilities Manager, Edward Coons who will serve as Construction Project Manager. Additionally, in July, and in coordination with the architects, curator Patricia Tice (Project Director) will order tracks, carriages, storage equipment, and storage supplies. SpaceSaver representatives will install tracks on the new concrete slab on grade in September. An epoxy concrete floor topping will be added to level the floor with the storage equipment rails and finished with a low VOC sealer/hardener.

### **Activity 2: *Volunteer and staff training (July, 2010)***

*Responsible parties:* Barbara Moore, Project Conservator; Patricia Tice, Project Director; staff and volunteers.

Before the move begins, Project Conservator Moore will provide two half-day collections care training sessions on handling methods, storage techniques, and simple mountmaking for all staff and volunteers who will be involved with the move.

### **Activity 3: *Move textile collection to east wing staging areas and process for storage (July 2010 – September 2010)***

*Responsible parties:* Patricia Tice, Project Director; Barbara Moore, Project Conservator; Darlene Braun, Project Assistant; Charles LeCount, Senior Director of Programs and Collections; Sabrina Henneman, Collections Registrar; Brian Nagel, Director of Interpretation; Richard Christian, Project Conservation Technician; and volunteers.

Starting in July 2010, the collections staff, assisted by volunteers, will move the textile collection from textile storage located in the basement of the museum shop onto shelves in the staging area prepared in the AG east wing. (We are commencing with this collection because we believe these objects to be most at risk). In consultation with the conservator, they will construct mounts, vacuum and re-box items, as needed, readying them to move into the new storage rooms as soon as these spaces are judged to have reached equilibrium. Textiles will also be inspected for any possible insect activity in the staging area and will be treated, if necessary, with the advice of conservator Moore. Based on previous work with this collection, we estimate that this work will require approximately three months.

**Activity 4: *Move 3-D collections to east wing staging areas and process for storage* (October 2010 – February 2010)**

*Responsible parties:* Patricia Tice, Project Director; Barbara Moore, Project Conservator; Darlene Braun, Project Assistant; Charles LeCount, Senior Director of Programs and Collections; Brian Nagel, Director of Interpretation; Sabrina Henneman, Collections Registrar; Richard Christian, Project Conservation Technician; and volunteers.

Storage rooms in historic buildings will be emptied one by one by the same team of staff and volunteers during the month of October. (This schedule takes account of the weather in upstate NY, to avoid having to transport objects between buildings during the winter.) Objects will, in most cases, be carefully boxed for transport with appropriate padding materials. Where additional protection is needed, added backings or storage restraints will be fabricated. We will use a rented moving truck with a hydraulic lift to move collections from other buildings. Dusty surfaces will be cleaned and inspected for any insect activity in the staging area under the conservator's guidance. We estimate that this work will require five months to complete.

**Activity 5: *Install mobile carriages and collections storage equipment. Allow storage room to reach equilibrium.* (December 1, 2010 – February 28, 2011)**

*Responsible parties:* Patricia Tice, Project Director; SpaceSaver; Edward Coons, Construction Project Manager; Barbara Moore, Project Conservator.

SpaceSaver will install mobile carriages and equipment at the conclusion of the renovation work. When installation is complete, museum staff and volunteers will clean all surfaces of new storage equipment. Storage spaces will be monitored until the environment is stabilized within target environmental ranges.

**Activity 6: *Install collections into new storage equipment* (March 2011 – June 2011)**

*Responsible parties:* Patricia Tice, Project Director; Barbara Moore, Project Conservator; Darlene Braun, Project Assistant; Charles LeCount, Senior Director of Programs and Collections; Brian Nagel, Director of Interpretation; Sabrina Henneman, Collections Registrar; Richard Christian, Project Conservation Technician; and volunteers.

The prepared collections will be installed in the new storage equipment, beginning with the fine arts collection, followed by furniture and other large 3-d objects, small 3-D objects, textiles and clothing. The storage installation as a whole will be overseen and coordinated by Curator Patricia Tice. Collections Registrar Henneman, who will track objects on the museum's database throughout the move, will inventory and record the new storage location for each object as it is placed in its permanent position.

## **Project Team Project Team**

**1. Bero, John, Architect.** John Bero has a BA in Architecture, Rensselaer Polytechnic Institute. John Bero, founder of Bero Architecture, 1976, has worked extensively with museums and has served as an IMLS field reviewer for the 1995 and 1999 grant applicants to the Conservation Project Support program of Heritage Preservation. Bero has provided workshops on "Accessibility and Historic Preservation" sponsored by the Preservation League of New York State in Rochester & Tarrytown; "Building for the Arts" at multiple locations, sponsored by the New York State Council on the Arts and "Making Your Building Accessible" in Buffalo NY as part of "Caring for Your Religious Properties" sponsored by the NY Landmarks Conservancy and the Preservation League of NYS. Bero has won many awards for preservation, including an energy-efficient storage space at Rochester's Susan B. Anthony House and will advise the team on technical matters, particularly those relating to sustainable HVAC.

**2. Braun, Darlene, Project Assistant.** Braun has worked as assistant to the Curator, John L. Wehle Art Gallery for two years and has been trained in correct object handling procedures. Braun assists in the annual inventory of the fine arts collection, is familiar with the museum's cataloging software, and regularly organizes volunteers working on collections-related projects. Braun has also participated in other collections-related tasks which include packing and unpacking of artwork, and the reorganization of 3-D collections within the historical houses, giving her a familiarity with the museum's collections as a whole. Braun will be responsible for organizing and scheduling volunteers and assisting with the packing, moving, and installation of collections.

**3. Christian, Richard, Project Conservation Technician.** Christian has worked in this capacity at GCV&M for three years, where he has treated paintings, prints, and 3-D objects. Christian has eight years experience with art conservator Julia Bogacki, ConservArt, Williamsville, NY, and five years experience as conservation technician at Strong Museum where he cleaned and treated their extensive toy collection, under the direction of Barbara Moore, and supervised conservation volunteers assigned to that project. Serving as Project Co-ordinator, Christian participated in the move of Strong's collections into a new storage facility. He holds an MA from Long Island University in Fine Arts. Under Moore's direction, Christian will prepare objects for installation in storage, assist with the move of collections, and construct storage mounts.

**4. Coons, Edward, Museum Construction Project Manager.** Coons, GCV&M Senior Director of Facilities & Grounds, is extremely experienced in large renovation projects, having managed the operation, renovation and maintenance of a 100K sq. ft. building and all facilities equipment at the Corning Tropol Corporation, Corning, NY. Coons directed the work performed by vendors and suppliers; supervised modifications and upgrades to existing HVAC systems; managed \$3.5 million of various building renovation projects; negotiated and supervised over \$1.0 million of multiple roof replacements; developed and implemented a capacitor correction for power factor problem; supervised the design and construction of research and production clean room renovations; served as the on-site health, safety and environmental coordinator to insure compliance with all government and corporate regulatory requirements. Edward Coons will be the liaison between the general contractor and GCV&M, and will supervise and help coordinate all renovation and construction at the AG.

**5. Henneman, Sabrina, Project Registrar.** Henneman holds an MA in History Museum Studies from the Cooperstown Graduate Program, State University of New York, Oneonta. As GCV&M Registrar, Henneman is responsible for maintaining all collections records and paperwork, including location records and inventories. Henneman will participate in the packing, moving, and installation of collections into the new storage facility, as well as ensuring that inventories and GCV&M's cataloging software is kept up-to-date with location changes.

**6. LeCount, Charles, Senior Director of Programs and Collections.** LeCount will provide general administrative oversight to the project, advising Curator Tice and the project team, and will participate in

the move of collections from their present locations into the new storage facility. LeCount has special expertise in historical clothing and textiles, gained from his work with the collections at SPNEA, now Historic New England. LeCount is responsible for direct oversight of GCV&M's 68 historic structures, Art Gallery, Library, Carriage Museum, Nature Center, and public programs. LeCount previously was Chief Curator at the North Carolina Museum of History in Raleigh, South Carolina, and site director/curator of Historic Brattonsville, Rock Hill, SC where he administered 45 historic structures and oversaw preservation and interpretative programs. LeCount holds a BA in Anthropology from Southern Illinois University and an MA in Historical Administration from Eastern Illinois University.

**7. Moore, Barbara, Project Conservator.** Moore will serve as Project Conservator and will advise the staff on all matters related to conservation. Moore holds a graduate diploma in conservation from the University of London and is a professional associate member of the American Institute for Conservation. She has thirty-six years experience as a conservator, serving as Assistant Director for Conservation and Collections, and Chief Conservator of the Peabody Museum of Natural History, Yale University, and Chief of Conservation at Strong Museum. Moore has had extensive experience in planning of museum-quality and environmentally correct storage facilities and has advised museums throughout the country on this topic. Moore will review the environmental conditions of the new storage rooms, ensuring that the project will meet accepted standards for collection care, train staff and volunteers in mount-making and proper storage techniques, and meet regularly with Tice and Christian to review cleaning of the objects and any required treatments.

**8. Nagel, Brian, Director of Interpretation.** Nagel is extremely familiar with collections stored in the historic structures as he originally joined the staff in 2005 as curator of collections. In 2006, Nagel became the Director of Interpretation, responsible for management of the interpretive staff and for developing interpretive programs for museum offices. Prior to these appointments, Nagel had served as Curator of Regional History, Rochester Museum & Science Center. Nagel holds a BA and MA in Anthropology from the State University of New York, Buffalo. Nagel has special expertise in ceramics and will assist in moving the collections into the new storage facility.

**9. Page, John, Project Architect.** With sustainability and preservation as core values, John Page, now co-owner of Bero Architecture, will serve as the project's main architect. Page holds the degree, Master of Art and Architecture from the University of Florida (1976) and has worked with John Bero since 1982. Page won a Merit Award from the Landmark Society of Western New York for his rehabilitation of an historic train station for use as a library and for his adaptive reuse of the historic "Warfield Block," to mention just two of his many associations with cultural organizations. As project architect, Page will work with Lawrence Smith, project engineer, and Ed Coons, Construction Project Manager, to design and coordinate all aspects of the renovation.

**10. Smith, Lawrence, Consulting engineer.** Smith is a licensed NY State engineer with 25 years of experience working with the design and installation of HVAC, energy conservation systems, electrical power services, exhaust systems, plumbing and piping design. Smith holds a degree in engineering from Rochester Institute of Technology and will work with project team members to design an energy-efficient, sustainable HVAC system.

**11. Tice, Patricia, Project Director.** Tice, Curator of the John L. Wehle Art Gallery, will oversee the move and reorganization of these collections. Tice holds an M.A. in Museum Studies from the University of Michigan, where she was also a National Endowment for the Humanities Fellow. She has more than 30 years of curatorial experience with historical and art collections, and has organized and supervised large collection moves at The Henry Ford Museum, Dearborn, MI and at the Strong Museum, Rochester, NY. Prior to her tenure at GCV&M, Tice served as Director of Collections at Strong Museum where she worked with Barbara Moore to plan a new storage facility. Tice has also served as a textile and fine arts consultant to the Rochester Historical Society and the Memorial Art Gallery of the University of Rochester. Tice will assume overall responsibility for the project, and assist in the moving and installation of collections into the new storage facility.