



NATIONAL
ENDOWMENT
FOR THE
HUMANITIES

DIVISION OF PRESERVATION AND ACCESS

Narrative Section of a Successful Application

The attached document contains the grant narrative 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 NEH Division of Preservation and Access application guidelines at <http://www.neh.gov/divisions/preservation> 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, 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: Preserving Collections at the Buffalo Bill Center of the West

Institution: Buffalo Bill Memorial Association

Project Director: Beverly Nadeen Perkins

Grant Program: Sustaining Cultural Heritage Collections

Narrative

Introduction

The Buffalo Bill Center of the West (Center) requests \$48,933 from the National Endowment for the Humanities Sustaining Cultural Heritage Collections to develop a comprehensive plan to solve collections preservation issues in the Center's existing storage and work areas. The planning grant will support a team of consultants who will work with Center curators, the conservator, and museum services staff to evaluate vault space as well as workstations that serve staff, collections activities, professional researchers, and the public. Recommendations from the team will be incorporated into a *Master Preservation Plan* that will focus on ways to either optimize or expand the current building envelope, including appropriate passive and active measures, to mitigate risks to stored collections. The plan will emphasize achievable targets for collections environments, as well as solutions that are energy and cost efficient, best utilize the framework of the building, and make efficient use of available storage methods and furniture.

In preparation for a collections storage and work area evaluation, the Center formed a Collection Space Committee, and each museum area began comprehensive inventories and surveys of collections. The end goal of this project is functional, sustainable storage and associated collections spaces to extend long-term preservation benefits for the Center's collections. Optimal storage and workspaces will support the Center's prioritization of care and responsible organization and growth of the collections; it will also provide opportunities for broader access to the collections.

This project will take place at a critical time for the Center. With a new Executive Director who supports staff's focus on responsible collections care, and trustees who have made this a priority, curatorial and conservation staff began actively assessing collections prior to an ongoing deaccessioning process. The Center has been collecting for more than a century. Throughout our 100 years, collections have grown as new museum wings and vault storage areas were built every ten to twenty years. Workspaces have been adapted for collections storage on an ad hoc basis. More than 70 percent of the Center footprint is for public exhibition or collections storage space, and as much as 15 percent of the collection is on exhibit at a given time. Paramount to our mission is the preservation of artifacts of the American West's past and present in order to facilitate access.

In late 2018, the Center began a Strategic Plan update based upon a new mission statement, "*Connecting People with the Stories of the American West.*" The mission is supported by four pillars: Knowledge, Audience, Sustainability, and Community. Each pillar, or focus, is of equal importance and is interconnected in its statement of goals, action steps, timetables, and measures. Staff and trustees are committed to ensuring the Center's collections and experiences are here for generations. This long view guides how we preserve and protect the collections, create new scholarship and reinterpretation, and secure funds to proactively care for buildings and infrastructure. There is a renewed focus on listening to, understanding, and embracing our audiences in the creation of programming as well as a need to use the power of collaboration with diverse communities. The Strategic Plan addresses the goal of sustainability in the growth, stability, and long-term health of the people, collections, finances, and buildings of the Center, and it will guide the Center through 2022.

As much as we look to the Center's future, its past provides a glance into the evolution of a complex cultural organization. In 1917 a group of local citizens from Cody, Wyoming, formed the Buffalo Bill Memorial Association to memorialize the life and times of the town's favorite son and namesake, William F. "Buffalo Bill" Cody. In 1927, the first Buffalo Bill Museum opened in Cody. Since that time, the Board of Trustees, drawn from across the country, has expanded the mission and concept of the original museum into more than 307,000 square feet of five major galleries and a research library. Known

collectively as the Buffalo Bill Center of the West, the complex includes the Buffalo Bill Museum, Cody Firearms Museum, Draper Museum of Natural History, Plains Indian Museum, Whitney Western Art Museum, and McCracken Research Library. Located 52 miles east of Yellowstone National Park, the Center attracts regional, national, and international visitors, en route to and from Yellowstone, representing nearly every age and demographic. Our location is central to tribal communities of Wyoming, Montana, Idaho, and surrounding states who are far from large urban museums with Native American collections. The Center also serves the local community of Cody, Park County, and the Big Horn Basin. In 2018, more than 170,000 people visited the Center.

Our new mission statement, based on connections with diverse cultural histories and present identities, supports an interdisciplinary approach that reflects the very nature of the West itself. Its natural history and resources brought people into a region already inhabited by Native American cultures to make lives here, capture its beauty, and use its resources. Our mission is accomplished through our exhibitions, educational programming, and publications that interpret a complex American West via five museums and a library. The Association's Trustees administer an endowment of more than \$65.75 million and an operating budget of more than \$11.45 million with 79 full-time staff, 31 part-time, 110 seasonal employees, and more than 165 active volunteers.

Significance of Collections

With a depth of collections that span history, art, culture, and natural history, the Center is unique in its ability to provide a multidisciplinary look at the American West. Taken together, the Center houses 68,000 humanities-related historic and cultural objects; 30,000 books; more than 500 manuscript collections; and in excess of 750,000 photographs. The Center is a well-known tourist destination, with visitors from every region of the United States, most areas of Canada, and many international locations. Programs are provided for walk-in visitors, children, adults, families, schools, and scholars. Educational programs include artist-led workshops for children and adults; artist-, historian-, and scientist-in-residency programs; gallery demonstrations; hands-on activities; classes; fellowships and internships; and lectures. Annual outreach programs focus on historical and contemporary western issues, Plains Indian cultures, art, and natural history. In 2019, interpretive programs and on-site tours reached more than 50,000 visitors, and school tours and programs reached 5,000 youth. Since beginning *Skype in the Classroom* lessons in 2013, we have reached 115,000 students through 850 lessons in 50 states and 33 countries.

The **Buffalo Bill Museum** (BBM) is the flagship museum of the Center. First opening its doors to the public in 1927 in a log cabin in downtown Cody, the original BBM was modeled after William F. Cody's house at his nearby TE Ranch. The BBM's focus is on the life and times of American icon William F. "Buffalo Bill" Cody (1846 – 1917), the noted scout, frontiersman, showman, entrepreneur, and town founder. Positioning the story of Cody's life within the context of the history and myth of the American West, the museum documents how, in an age without television or motion pictures, Cody became the world's foremost communicator about the history, promise, and enduring spirit of the American West. In addition to documenting the life and interests of William F. Cody, the museum's collection interprets the history of the American cowboy, dude ranching, western conservation, and frontier entrepreneurship. The BBM moved into a new building in 1969 and was renovated and reinstalled in 1986 and 2012. The museum holds more than 9,000 artifacts which are presented alongside interactive exhibits and multimedia interpreting Buffalo Bill's life and legacy. Significant objects include: Annie Oakley's "Wild West" regalia and competition rifle; the Deadwood stagecoach used in the Buffalo Bill's Wild West; jewelry presented to Buffalo Bill by heads of state and royalty; more than 200 original Wild West posters; Theodore Roosevelt's western saddle; and Amelia Earhart's flight jacket.

The **Cody Firearms Museum** (CFM) houses more than 20,000 artifacts and nearly 7,000 firearms, the most comprehensive assemblage of American firearms in the world. The collection includes objects

dating back to the 1400s through the present day and is international in scope. The art and craft, and the science of making firearms in an industrial context is fully revealed in these objects. The encyclopedic collection appeals to firearms enthusiasts as well as the general public, interpreting firearms in the context of military history, the development of technology, manufacturing, and the art of embellishment. The CFM, and the firearms-related collections in the McCracken Research Library, make the Center the premier institution for the scholarly study of firearms. In 2019, the CFM re-opened after a \$12 million renovation, supported in part by a grant from NEH. A new interpretive focus encourages visitors to learn and discuss the history of firearms to inform their own opinions on these objects. The CFM experience, *The Tools of Our Endeavors*, features seven new galleries that tell the story of firearms from the 1400s to the synthetic handguns of today. The museum's special exhibitions gallery opened with a spotlight on engraved arms titled *The Art of the Gun: Beauty versus Function*. In addition to reinterpreting the collections, the project positively affected three areas of concern within the CFM infrastructure: climate control, fire detection, and security. To further enhance access, a research room was added on the lower level of the museum to assist with collections-based studies.

The **Draper Natural History Museum** (Draper) opened in 2002 as a vehicle to integrate natural science with humanities and present a broader perspective on the American West. The Draper uses interconnected exhibit galleries representing biomes of the Greater Yellowstone Ecosystem, along with programs, research, and volunteer opportunities to ignite curiosity, drive exploration, and create advocates for nature. Fundamental to Draper functions is its natural history collection, specimens that serve as a sampling and documentation of the region's natural and cultural environment—past and present. These specimens help validate past research and serve as a resource for future studies. When used in exhibits and programs, and in conjunction with scientific research, cultural history, and western art, the specimens become an engager and teaching tool to present natural history and explore how humans continue to establish, foster, and fulfill their relationships to the natural world. New exhibits and programs provide further opportunities to strengthen the connections between natural science and the humanities. In 2018, for example, the Draper opened a new permanent interdisciplinary exhibition, *Monarch of the Skies: The Golden Eagle in Greater Yellowstone and the American West*, which details the eagle's role in nature and its spiritual and cultural significance in the lives of Plains Indian peoples. As an extension of the Draper, the Center's Raptor Experience is a live raptor education program that allows us to share some of the area's most spectacular wild animals with visitors.

Founded in 1979, the **Plains Indian Museum** (PIM) uses its world-class collections to examine the relationship between art and culture in a critical time of Plains Indian history through the present day. More than 7,500 objects complete the story of the people who made them and used them. The majority of the collections document a time period from approximately 1850 to 1900, an era of extreme cultural change. The PIM plays a critical role in education and cultural preservation for regional Native communities, including Native scholars and artists who study tribal arts, and families and school groups from Great Plains reservations who visit. An Advisory Board comprised of Native Americans and non-Natives, formed in 1976, still guides the exhibition and interpretation of this museum collection. Significant examples from the collection include: a Nez Perce buffalo-hide tipi from the 1830s; Oglala-Lakota chief Red Cloud's war shirt from the late 1800s; and a contemporary beaded parade saddle. In 2007, the PIM acquired the Paul Dyck Plains Indian Buffalo Culture Collection, considered by art historians, ethnologists, and historians to be one of the most comprehensive privately held collection of pre-reservation materials in existence today. The PIM recently expanded its collecting mission to include greater representation of contemporary Native artists, whose work is featured in the Native Arts Today Gallery and throughout the museum.

The **Whitney Western Art Museum** (WWAM) presents a broad spectrum of western American art from historical masterworks of the nineteenth century to compelling contemporary art. Works span stylistic developments from realism and romanticism to impressionism and expressionism and offer diverse

perspectives on the American West. The collection of nearly 8,000 artworks includes paintings by George Catlin and Alfred Jacob Miller; grand landscapes by Albert Bierstadt and Thomas Moran; wildlife art by John Jacob Audubon and Carl Rungius; genre paintings by William Ranney and Edgar Paxson; illustrations, paintings, and sculptures by Frederic Remington and Charles M. Russell and the artists they inspired, including Maynard Dixon. The WWAM also holds studio collections of Remington, W.H. D. Koerner, Alexander Phimister Proctor, and Joseph Henry Sharp. Art is displayed throughout all of the Center's galleries where it helps illustrate stories of diverse people, magnificent environments, wildlife, and historic events. Significant individual works in the WWAM include: *The Last of the Buffalo*, an oil painting by Albert Bierstadt; *Coming Through the Rye*, a bronze sculpture by Frederic Remington; and *When Law Dulls the Edge of Chance*, an oil painting by Charles M. Russell. The secondary strength of the collection is contemporary art of the West, created since the 1950s. Among these holdings, the WWAM has significant representation of art of Indigenous artists including T.C. Cannon and Fritz Scholder. Other featured contemporary artists include Harry Jackson, T.D. Kelsey, and James Bama. A series of publications, *Whitney West*, surveys works by major western artists such as Albert Bierstadt, Joseph Henry Sharp, and artists who painted in Yellowstone National park, such as Thomas Moran. This series features scholarly essays and reproductions of hundreds of works of art. A major exhibition, *Albert Bierstadt: Witness to a Changing West*, opened at the Center in June 2018 and traveled to Gilcrease Museum in November 2018.

While preserving treasures and rare items, the **McCracken Research Library (MRL)** functions as a research center for staff and scholars, continually acquiring publications on the American West. The MRL also boasts historic archives and photographs that comprise significant Native American, natural history, and western American history collections representative of the Center's five museums. The collections, used year-round by scholars worldwide, include printed and electronic materials and resources, original archives and manuscripts, photographs, microforms, and audio and video recordings of western American history, culture, and environments. Noted collections include the archives of Buffalo Bill's Wild West and the papers of William F. Cody; engineering drawings of the Winchester Repeating Arms Co.; and the studio collections of artists W.H.D. Koerner, Frank Tenney Johnson, and L.A. Huffman. Holdings total 30,000 books, 500 manuscript collections, and more than 750,000 photographs. Rare books recount experiences of early travelers, with illustrations that often convey an imaginary version of the West. The library is also focused on a digital initiative, with more than 70,000 images currently available on the Center's website. MRL collections have also inspired recent exhibitions. *Out North Where the West Begins: Harold McCracken in Alaska and the Arctic* was based on Harold McCracken's arctic expedition of 1928. McCracken was the Center's first director and became famous through his adventures hunting bears, filming wildlife, and exploring in Alaska. The exhibition featured published writings of McCracken; glass plate negatives of the expedition; a film containing footage of the expedition; scrapbooks; and artifacts from the American Museum of Natural history and the Ohio Historical Society Museum in Columbus.

The **Papers of William F. Cody**, initiated in 2007 as an MRL-based project, collects, edits, and publishes material from the period of William F. Cody's birth to well beyond his death, in print and in an online, open-access, digital edition. The material is published on *The William F. Cody Archive (Cody Archive)* and is available at no cost to an international audience of all interest levels. The archive is a digital collection of memoirs and autobiographies, business records, correspondence, writings, photographs, video and audio recordings, Wild West material, and newspaper and magazine articles about the Great Showman. These materials are used extensively by scholars focused not just on William F. Cody, but the history and culture of the American West. This project has benefitted from numerous NEH Scholarly Editions grants over the years.

Interpretive Education at the Center embraces innovative, engaging, and thought-provoking methods of understanding cultural, historical, and natural objects and resources. Based on the collections, interpretive

specialists share stories of the American West with school children and visitors using an informal learning approach. On-site programs and demonstrations bring objects and exhibits to life. Website visitors engage in digital learning, with virtual tours and layered information using online collections. Programs focus on historical and contemporary western issues, Plains Indian cultures, western art history, and the stories of Greater Yellowstone. Authors, scholars and noted professionals present programs on a wide range of topics about the West. Objects from the Center's collections are essential components of all interpretive programs. After the passage of the Indian Education for All legislation by the State of Wyoming in 2017, the Center added a Native Education Outreach Specialist to develop curriculum based on American Indian histories and cultures with the Center's collections as a key component of learning.

Current Conditions and Preservation Challenges

Each of the Center's five museums and the research library has its own distinct storage areas scattered throughout the building. There is also one off-site warehouse. Storage vaults were added to the main building with the addition of each wing. The history of the Center's buildings and vault storage is fascinating, but it has resulted in environmentally and logistically challenged spaces because of additions to public and non-public spaces. Storage issues have accumulated and have challenged our resiliency.

In general, current conditions in vaults and workspaces are inadequate, which puts the collections at risk. In many cases, storage space just does not exist. In other cases, space is cramped and/or used for multiple purposes. Some vaults have issues with ground water leaks. Relative humidity and temperature are difficult to control due to the extremely dry climate in Cody. Currently there are 18 dataloggers for climate control in storage areas throughout the building. Additional dataloggers are necessary in order to assess climate conditions in other storage spaces, zones within storage areas and within cabinets. Nine storage areas lack dataloggers; purchasing this equipment prior to the on-site visit will allow the building engineer to supply accurate data to the consultant team before they arrive.

The **Whitney Western Art Museum (WWAM)** has three basement vault locations: Vault A for two-dimensional Western American art in frames, or works on paper including Plains Indian ledger art; Vault B for three-dimensional Western American art and historic artist studio collections; and open bins in the registration hallway for framed art and photographs. The art storage vaults and associated workspace of the registration offices were constructed in 1959 with limited improvements to date. The 1959 basement complex has ceiling heights that are a maximum of 7'10" and 11' doors with keypad access for all areas. Vault A was constructed from concrete blocks; floors and columns evoke a bunker-like quality. The vault measures 1,475 square feet and contains 4,307 objects. Vault A's outdated metal racks for framed works are unwieldy and inefficient as vertical storage. The rolling racks cause so much vibration that pastels and fragile paintings cannot hang on them, nor can the racks accommodate larger works. Remaining storage consists of bins, unsealed wood shelves, and old-style metal map drawers. All are overcrowded and difficult to access for staff and researchers. Modern climate controls within the space are non-existent (separate wings of the museum and storage areas rely on distinct HVAC systems) other than portable monitoring devices. Vault A has an outdated Halon fire suppression system, which is still considered functional, but is questionable in its safety and environmental impact. Low ceiling heights prohibit storage and movement of larger works. These are relegated to hallway storage on foam riser blocks, office corridor art, or as seldom rotated works in the Center's ancillary gallery spaces.

Vault B, used primarily for sculpture, benefited from Delta Design cabinetry for approximately 80 percent of its collections, but the cabinets were poorly laid out with little lighting and few adaptations for sculpture. The placement of heavy sculpture on overloaded drawers endangers artwork and staff, limiting visual and physical access. Additional collections objects reside on open metal shelving in acid free enclosures. Oversize sculpture and historic artist studio furniture from the Joseph Henry Sharp collection are stored on the vault floor on foam block risers with semiannual rearrangements during rotations. One 5' x 3' table serves as a work area in Vault A; no available workspace exists in Vault B.

Though the art collections are not imminently at risk, the current spaces and environmental and security systems for storage of our priceless collections are dated and sub-standard. As the earliest-built storage facilities at the Center, the WWAM vaults need significant modernization in their design and basic infrastructure, including HVAC systems, lighting, and collections work and examination spaces to store objects more safely and to improve access for staff, researchers, and other audiences.

Outside the art vaults is a hallway storage area next to the Registration offices with visible water pipes overhead. The Registration offices and file areas store the original paper copies of the Center's donor, lender, purchase, and individual object records in file cabinets. The Registration staff of three people share a workspace that is not adequately ventilated; at 16' by 25', it cannot comfortably accommodate records, objects, and people. The hallway outside Registration leads to the Buffalo Bill Museum vaults and is lined with open storage bins on one side and metal shelving on the other. Framed objects from various museum collections are stored in two-story bins and exposed to light during business hours. Objects bump against each other when moved. This area is often accessed by staff (it is also a general staff access passageway) to search bins during research, inventories, or tours, but it suffers from the most basic of storage techniques that damage the artwork.

In 1959, the **Buffalo Bill Museum** (BBM) collections were moved to "new" storage vaults in the WWAM wing and, therefore, share similar challenges to what has been described in WWAM Vaults A and B. The Center also stores oversize carriages, stagecoaches, and other accessioned and non-accessioned objects, many associated with the BBM, in an offsite warehouse. BBM's Vault C measures 2,075 square feet and houses 7,712 historic and cultural objects, including Buffalo Bill's clothing and personal items, Wild West show objects, western history collections, ranching and local history collections, and saddles and saddle-making tools. Part of BBM Vault C is an outside wall and suffers from moisture and high humidity, leaking, and seepage from its walls. Seasonal leaks and puddles from rain and hailstorms were not uncommon until French drains were added in the gardens surrounding the complex several years ago. Absorbent baffles and pads remain in place in anticipation of new leaks. The ceiling height in the vault is under 7', and the space is overcrowded despite the addition of banks of Delta Design cabinetry in the 1990s. Historic saddles are on open racks covered by plastic sheeting, and objects overflow onto open shelving, older metal cabinets, and on top of other cabinets. A small 3' x 6' workstation limits research and examination work, as does poor fluorescent lighting and a lack of space overall. Tours and research of Buffalo Bill's personal objects in storage, although much in demand, are severely limited.

BBM Vault D has 360 square feet of space with 43 oversize objects. It is connected to vault E with 1,525 square feet and 313 oversize objects such as pianos, desks, and chairs. The vaults consist of open shelving with larger items on the floors and pushed against walls, severely restricting movement of people and objects. Like other vaults in this wing, the lighting is poor—blocked by shelves of objects—but the rear of D and E do not have lighting, which makes any type of work in this vault nearly impossible unless objects are pulled into the aisles or out of the vaults. Because the BBM's large-scale Wild West posters are delicate, large, multi-section works on paper, they cannot reside in the BBM vaults but are stored in Preparation (a workspace). The off-site Webster Warehouse, a 1940s Quonset hut with two garage doors, has no climate control, and collections are exposed to dirt, dust, extreme temperature fluctuations, pests, insects, and occasional leaks. An interior "clean room," built approximately ten years ago, holds accessioned large-wheeled vehicles to provide basic protection until a long-term solution can be reached.

The **Cody Firearms Museum** (CFM) has three storage vaults and a research room for its collections of firearms, other weapons, ammunition, tools, and other related objects. The vaults were built along with the CFM wing in 1991 in a complex connected to the older WWAM wing. Because the collections span firearms development over several centuries, there is wide variance in shapes, sizes, and classes ranging

from historic long guns to modern pistols. Vault H is one of the largest of the vaults at 1,205 square feet, and it is at capacity for storage with 4,554 objects. Vault H has a small worktable used for examinations and for photography of smaller firearms. Vault I holds oversize firearms and objects and has a limited amount of workspace, which necessitates transport of firearms to Vault H for collections work or other examinations. While the vaults feature Delta Design cabinets, they were installed vertically and fill all usable space; in some instances, the doors do not fully open in very tight aisles.

The most significant shortcoming of the CFM vaults, beyond a lack of space, is the absence of specialized storage and a shortage of consistent housing materials such as padded surfaces and supportive racks and storage mounts. The category “specialized storage” also includes ammunition and NFA or Title II firearms. While most of our ammunition is likely inert due to age, best practice would be to store ammunition separately from firearms in dedicated, secure cabinets for safe handling practices. Currently we store ammunition in archival boxes, plastic cases, or in original containers interspersed with the rest of the collection. A limited group of historic ammunition was identified in 2014 as having lead contamination, which required OSHA regulations for the handling and isolation of the materials, as well as plans to mitigate the contaminants. This type of contamination may not be limited to this group of ammunition. The Center does not currently have the technology for large scale chemical testing or analysis, although it has procedures for isolating and handling contaminated objects. Title II firearms include machine guns, silencers, short-barreled rifles and shotguns, destructive devices, and any other weapons. These can range from cane guns to Cold War machine guns. United States law requires the Center to register all Title II firearms and materials at the federal level. There is no legal requirement to store them separately from other firearms, however the Center stores them in a special space, Vault I, which has higher security restrictions than regular firearms storage. We could continue this practice, but Vault I is also used for oversize object storage for the CFM. Heavy guns on high racks in a narrow corridor make this area especially hazardous for staff. The recent CFM renovation project (completed July 7, 2019) addressed issues with respect to environmental controls and security in the gallery areas only, with upgrades to HVAC units, security cameras, and monitoring systems. The project added additional “open storage” exhibitions with high-volume vertical pull-out cases and horizontal drawers to enhance visitor and researcher access to the collections. The design also included a research room dedicated to the examination of firearms collections to reduce entry into the vaults; a case lift; and additional cabinets for Vault F to relieve storage pressures. Despite these measures, the CFM vaults are at capacity with no room for segregated storage of special arms and materials, and no room for growth and basic storage.

The **Plains Indian Museum** (PIM) gained space at the Center in 1979 with a substantial addition of vault and shared workspaces for its collection of material culture. This area features four vaults: Vaults L and M for general PIM collections, Vault J for archeological materials and human remains, and Vault O, the Sacred Room, for materials that are sacred and ceremonial. Most Vault O items fall under the Native American Graves Protection and Repatriation Act (NAGPRA) or the Center’s Sacred Materials Policy. Vault O and Vault J have restricted staff access because of the sensitivity of the materials. The cabinetry and object storage in the PIM are generally in good condition, benefitting from generous ceilings and two generations of new cabinetry from grant awards in the 1990s, and a Save America’s Treasures award in 2008. Vaults L and M have ample ceiling heights with large double doors. Cabinets are stacked double and must be accessed by a rolling ladder. PIM vaults L, M, and J are at capacity and cannot optimally store large or irregular objects such as painted hides, fully beaded dresses, and other objects that must lie flat. Vaults L and M together measure 2,360 square feet and house 6,962 objects. Overflow of large volume objects such as basketry are stored on top of cabinets in plastic tubs. The recent acquisition of more contemporary Native art necessitates two-dimensional painting storage, which is not available in this vault complex and is often not available in other collections vaults due to space constraints. Vault J, the archeology vault, is the smallest of all Center vaults at 215 square feet; it consists of open metal shelving, metal lockers, and one locking Delta Design cabinet for human remains. The PIM collections

and staff have recently been subject to restrictions on handling due to the discovery of visible surface arsenic on objects from a recently acquired collection. Staff working in the PIM vaults operate under OSHA-mandated procedures for personal protective equipment and reduction of cross contamination of workspaces. Limited testing has been done on the collections using arsenic wet swab test kits to isolate contaminated objects, but the extent of the contamination of arsenic and other chemicals is unknown. This affects exhibitions and all collections functions, research, school and tribal community visits, NAGPRA visits, and tours. PIM staff is working with the chief conservator to test individual objects for repatriations and other immediate needs. The Center implemented procedures to handle and restrict contaminated objects but needs guidance in consolidated storage methods for this type of object.

The Draper Natural History Museum (Draper) galleries, storage, and workspaces were completed in 2001. The facilities include primary storage in Vault S, which is 1,625 square feet and contains 1,290 objects; and preparation and open storage, as well as specimen and overflow storage, in the Draper Discovery Lab. Specimens include fauna from the Greater Yellowstone Ecosystem. Vault S was originally designed as an exhibit space but has since been retrofitted for current use and includes carpet and a variety of storage methods including open metal shelving, boxes and bins, and metal cabinetry. Storage spaces are climate controlled, but the Lab is a multi-use space for specimen preparation, meetings, office space, and public outreach. The Lab features a large bank of windows for public viewing of the work and exhibition spaces within. A significant part of specimen preparation involves the use of dermestid beetles, which are currently housed outside the Center buildings and are preferred for environmentally sound methods not reliant on chemicals. A new storage facility (a small outbuilding) has been proposed on the Center campus for the dermestid colony. Specimen preparation also requires a fume hood, freezers, and chemicals. Current fume hood and freezers are inadequate, and specimens in process are adjacent to the collections storage area, not quarantined. There is limited accommodation for oversize specimens being added to the collections, so staff often use the freezer as temporary storage for these specimens awaiting preparation and eventual accessioning. The Draper was granted funding from the National Science Foundation for a limited number of new cabinets as part of a collections facilities improvement grant. This yielded several new cabinets for ornithology collections and the herbarium collection.

The McCracken Research Library (MRL) is also a collecting entity for books, rare books, corporate archives, journals, manuscripts, photographs, posters, firearms drawings, and limited three-dimensional objects. Storage areas include the Stacks Vault for general publications and periodicals, Vault P at 1,500 square feet (corporate archives and journals); Vault Q at 1,035 square feet (manuscripts); and Vault R at 2,075 square feet (manuscripts, photos, posters, firearms drawings and other large-format items). The Reading Room (books and rare books), an archival processing room, and digital scanning area round out the MRL space. An ongoing problem is the tight shelving space in the stacks, which features rolling compact shelving units. Overall concerns are poor lighting in Vaults R and P; safety of staff in accessing high shelves with heavy boxes; storage space for framed exhibits, which may be re-hung or re-purposed; and crates stored in collections space. Vault P was originally the Center's library stacks area and still has a wood door, instead of a fire door, that opens to a gallery. The Reading Room, a unique combination of storage and public access, has inadequate seating, amenities such as power sources, and security. It has suffered several instances of flooding, which was alleviated by the installation of new drains on the exterior but remains a concern and needs humidity monitoring devices. Staff continues to repurpose shelving along vault walls and actively digitizes corporate archives to open storage space. They have also considered a rolling ladder purchase for high shelf access in vault P as well as LED fixtures for all vaults.

The Center's vault storage spaces provide distinct areas for objects when they are not on exhibit or associated with other activities, but they often default as workspaces when shared collections workspaces cannot accommodate a high volume of staff and simultaneous projects; or when research visits necessitate work within the vaults to avoid relocation of groups of objects and/or culturally sensitive or fragile

materials. Museum services and curatorial staff are challenged by shared collections workspaces, including Vault N, the Center's main receiving vault and exhibitions prep room; crate storage and photography space; and Vault G, a preparation area and overflow storage. The work areas have forced-air heating and cooling ducts and are poorly retrofitted from previous functions. For example, Vault N was the Center's main carpentry shop until the late 1990s and has little secure, clean space for receiving or working on collections. There is inadequate storage for supplies and tools and a lack of ergonomically functional tables for staff. In the rear of Vault N is a small, secure receiving room with two metal fence grates for hanging paintings, and open metal shelving. The remainder of Vault N is used by all of museum services and curatorial staff for exhibition preparation and the unpacking and packing of large exhibitions, which are often simultaneous activities. The space is also used for research visits and specialized outreach activities with interns and school groups if vault or table space in other areas is limited. Vault N is the site for Plexiglas and Ethafoam cutting, mount painting, examinations, accessioning and numbering, supply storage, and many other collections-based functions. A mount fabrication room is located on the Center's upper level next to the carpentry shop in a 15' x 10' room.

The current crate storage area had multiple functions in the past, first as a preparator's studio, then a conservation lab, and now a crate storage room with an inaccessible corner meant for photography. Crates are kept in the room to minimize pest infestation and dust, but the space lacks any structure to assist in the storage or organization of the crates. The current conservation lab once served as the photography studio, which was disassembled in 2008. In addition to its conservation functions, it is used as overflow storage during large projects such as the recent CFM renovation. This limits its functionality for conservation assessments and treatments, and for training conservation interns. The makeshift photography area in crate storage is slated to move to conservation to accommodate contract photographers in 2020, but again, this is a temporary solution to a long-term need. The preparation area and Vault G have high ceilings but little modular storage or adaptations for oversize works that are so common to many of the Center's collections. (Please see Attachment #7 for photographs of current storage)

History of the Project

The need for this undertaking comes directly from studies and initiatives made at the Center in the past year. As a result of collections reviews, as well as survey data from curatorial and museum services departments, staff recognized the need to act in order to alleviate overcrowding and substandard storage and work conditions to support the Center's strategic planning initiative of sustainability. Collections of each museum were assessed for relevance to the Center's mission; collecting policies for the library and each of the five museums have been reviewed by Advisory Boards and updated to reflect focused acquisitions and loans; an inventory and bar coding of the CFM was completed prior to reopening in June 2019; the WWAM undertook an inventory of all modern and contemporary objects; and an inventory and collections assessment of the BBM began in October 2019 with more than 2,000 objects logged thus far.

The WWAM's inventory activities include updating database records with current photography, assessing condition, and confirming dimensions and locations of all objects. PIM staff discovered the presence of arsenic on select objects during routine object handling, which required a site visit and approval of updated protocols from OHSA. Because Center staff did not and still does not have the means for large batch testing the extent of the contamination or cross contamination, protocols for all PIM collections remain in place. The Center's conservator, Beverly Perkins, used a brief visit from consulting conservator Nancy Odegaard to discuss the presence and mitigation of arsenic in PIM collections objects. Perkins also hosted an XRF demonstration for Center staff to explore the use of technology in detecting arsenic in fall of 2019. Work began on the renovation of the CFM in early 2018, preceded by a complete inventory, extensive conservation surveys and treatments, and replacement of the CFM physical plant. All were completed by July 2019. Museum services staff made site visits in 2019 to view newer storage facilities of museums in the region. As common issues and needs continued to emerge, staff of all five

museums and the library began what are now tri-annual, ongoing reviews of loans and selective deaccessioning of collections as an institutional directive. With the assistance of the Center's Board of Trustees and Museum and Library Advisory Boards, staff has reviewed and refined collecting guidelines and museum missions for future acquisitions to promote responsible growth, use, and accessibility of collections. Non-accessioned items have also been approved for dispersal to date. These actions signal a change in the Center's collecting culture.

An Engineering Master Plan was completed in 2018 and adopted by the Center's Board of Trustees. The Center committed to funding the highest priority items over the next five years, including heating and humidification systems improvements, new roofs for the PIM and CFM, asbestos abatement, safety and security system upgrades building wide, and improved sewage removal systems. These remain critical needs to maintain the structural integrity of the Center's aging buildings. Fortunately, the Center received an NEH Sustaining Cultural Heritage Collections grant for work on the CFM as it underwent significant changes during the reinstallation process. Engineers connected CFM galleries to the central plant, eliminating outdated boilers and providing clean, efficient atomizer humidification in the CFM. The project also eliminated deficiencies in the fire and security systems of the CFM.

In the meantime, daily work habits have adapted in response to storage issues in less-than-ideal conditions. Tours no longer occur in the PIM vaults to view objects, and research visits require the use of personal protective equipment by staff and researchers while viewing and handling objects. Protective procedures cover work for outgoing loans, exhibition rotations, and inventories. Secure staff hallways house larger two-dimensional works as a means of "storage," which provides a pleasant viewing platform with the drawbacks of light and prolonged exposure to well-travelled hallways. Staff receive periodic training on disaster response to floods and other emergencies from the chief conservator, and "wet kits" were added outside each vault area to anticipate flooding or leaks.

Methods and Standards

The objectives of the project are twofold. First, the project team will review current conditions in vaults, storage spaces, and workspaces with an eye to developing an overarching solution to improving the capacity and quality of storage and collections workspaces with regard to environment, efficiency, and access. Second, the team will develop a plan that prioritizes the recommendations for achieving the primary goal of the project.

The project will be informed by professional guidelines and requirements including the Secretary of the Interior's current *Standards for the Treatment of Historic Properties*; the *New Orleans Charter for the Joint Preservation of Historic Structures and Artifacts*; the American Institute for Conservation for Historic and Artistic Works *Code of Ethics*; and the *Museums Libraries and Archives* section of the current *Applications Handbook* of the American Society of Heating Refrigeration and Air-conditioning Engineers (ASHRAE) as well as applicable local building codes.

An XRF will be used to test objects prior to the on-site visit. This PIM collection is complicated due to the presence of arsenic and perhaps other toxins that are residues of pesticides. PIM collections have been shifted around and placed in new storage furniture in an attempt to accommodate objects in a limited space. It is critical to the proposed project that we have knowledge of which collections, which objects, and what furniture is contaminated. Microchemical testing is labor intensive, cost prohibitive, uses toxins (mercury) in the test process, and is not as reliable as taking readings with the XRF. Testing will also take place in the small taxidermy collection of the Draper. Prior to the on-site visit, materials such as artifact inventories, construction drawings for mechanical systems, and floor plans will be provided to the consultants.

The planning team will be led by the three outside consultants. **Jerry Berggren** has been involved with museum assessments via the CAP grant program since its inception and has more than forty years of experience in the field of architecture. His knowledge and experience have been shared nationally, as a presenter and expert panelist for the American Institute of Architects (AIA), National Convention; the AIA Historic Resources Committee’s National Conferences and Seminar; the AIA Committee on the Environment’s Regional Design Charrette; the National Trust for Historic Preservation’s annual convention; and the International Facilities Manager’s Association (IFMA) World Workplace 1995. Berggren’s experience with existing structures is the foundation of Berggren Architects’ philosophy supporting the concept of “building on existing assets.”

Nancy Odegaard is considered a leader in the fields of conservation, collections management, pesticides in museum collections, and Native American relations. She has more than forty years of experience in evaluating collections environments and efficient use of available storage spaces. Dr. Odegaard is familiar with the Center’s buildings and collections and has advised the Center on the mitigation of arsenic in American Indian collections. She is co-author of *Material Characterization Tests for Objects of Art and Archaeology*, 2nd Ed.”, Archetype Publications, Ltd, London, England. Odegaard, Carroll, Zimmt. 2005. Her lecture, *A General Overview of Pesticides, Testing, Mitigation, and Removal* can be found here: https://sarweb.org/media/files/nancy_odegaard_presentation.pdf.

Dan Schinstock has more than forty-five years of experience in mechanical systems design and providing consulting services to museums and other facilities. He has worked closely with Mr. Berggren on many museum projects. The Center’s chief conservator, **Beverly Perkins**, is a Fellow of The American Institute for Conservation and The International Institute for Conservation, AIC National Heritage Responder, and has led numerous workshops on disaster mitigation and response. She has worked professionally with both Mr. Berggren and Dr. Odegaard. Building engineer, **Phil Anthony**, works closely with Ms. Perkins to design and maintain optimum building environments. Anthony’s white paper summarizing a recent NEH Sustaining Cultural Heritage Collections grant for the reinstallation of the CFM is attached. (Please see Attachment #7)

Work Plan

During the planning grant period, project team staff will assemble materials for a team of consultants to review, including environmental monitoring data collected by the building engineer. The project team will hold an orientation meeting to share perspectives, areas of responsibilities, and background materials. The consultant team will work with Ms. Perkins to plan a five-day site visit to the Center during which the consultants will meet with curatorial and museum services staff and tour the facility and the off-site storage building to assess the museum collections storage and work areas, the building envelope, and the possibility of new spaces. At the end of the week, the consultants will meet with Center curators and museum services staff to discuss their recommendations for a draft plan. The plan will be reviewed by all Center staff in preparation for a conference call with the consultant team. The team will issue a final report after which Center staff will meet to debrief on the project and develop implementation strategies.

October 2020	Negotiate contract with consultants	Perkins, Berggren, Odegaard, Schinstock
November – January 2021	XRF work complete/monitor dataloggers Documents to consultants	Conservation/registration/engineer staff Project team
February 2021	Prepare for site visit	Perkins
March 2021	Site visit	Project team
April – May 2021	Additional documents supplied	Project team
June 2021	Draft report released	Project team
July – August 2021	Report revised and finalized	Project team
September 2021	Final report and white paper submitted	Center staff

Project Team

The project team for the planning grant will include Center staff as well as outside consultants. **Beverly Perkins** will serve as project director. Perkins is Chief Conservator and Director of Museum Services Division at the Center. Perkins has led Center curators in their recent efforts to assess collections and storage areas in preparation for this undertaking. She will be joined by **Rebecca West**, Director of Curatorial, Education, and Museum Services. West also serves as Curator of the Plains Indian Museum and the Buffalo Bill Museum and as a liaison between the collections and content-based divisions and the Center. Rounding out the curatorial team are **Karen McWhorter**, Whitney Western Art Museum; **Ashley Hlebinsky**, Cody Firearms Museum; **Nathan Doerr**, Draper Natural History Museum; and **Mary Robinson**, McCracken Research Library Director. The curators, library director, and their immediate staff are integral in sharing the needs, histories, and content of the collections. **Phil Anthony**, Building Engineer, will also be part of the team. Senior Registrar, **Greta Russell**, will provide background on vault storage areas and collections storage issues. **Jerry Berggren**, principal and preservation architect for Berggren Architects, will assess space and storage systems in the Center and provide performance-based specifications for Center staff. Berggren will be joined by **Dan Schinstock** of Engineering Technologies, who will assess the HVAC system at the Center with respect to its impact on the collections. **Dr. Nancy Odegaard** will work with Berggren and the curatorial staff in their review of collections storage space. Odegaard is Conservator and Head of Preservation, Professor of Materials Science & Engineering, Professor of Anthropology, and Professor of American Indian Studies at Arizona State Museum.

Project Results and Dissemination

The resulting *Master Preservation Plan* will provide informed, usable, and forward-thinking solutions to the Center's collections storage preservation and access issues. Having firm guidance in the form of data from outside experts will translate into achievable goals and timelines to implement change in the vault storage spaces and associated workspaces of the Center. Along with this change comes the benefit of having storage and collection spaces efficient for all users: staff, researchers, students, tribal and community groups, donors, and museum colleagues. Greater access equals broader outreach and increases the ability to interpret and use the collections while simultaneously preserving them in secure and environmentally stable conditions. Ease of access to collections by Center staff also promotes innovation and regular creation of exhibitions and other content-based programming to support the Strategic Plan.

Because Center staff and the Board of Trustees are aligned on the critical need to address collections storage and access, a report will be shared immediately with the Collections Storage Assessment team to begin active project planning for implementation of the plan. Rollout of information will extend to all staff in town hall meetings led by our CEO, and to the Board of Trustees and Advisors as active volunteers and effective spokespersons for the Center. Staff teams will need to align collections procedures and processes to adapt to changes in the collections storage spaces, which will change daily work habits and long-term goals. The collections have diverse cultural associations from throughout the American West and, therefore, stakeholders are not limited to persons directly associated with the Center (i.e. staff and Board). Reports and subsequent plans will also be shared with communities to announce intent, communicate progress, and further promote access upon completion. This can be achieved through a variety of means of communication including social media, stories and Museum Minutes through our Wyoming Public Media specialist, website content, our Annual Report, *Points West* magazine features, professional conferences, and membership events. A white paper will be shared with NEH, staff, and trustees. Outreach to tribal communities can be achieved through established relationships with regional tribal organizations and schools and through direct contact by our Native Education Outreach Specialist. Museum staff has strong ties with professional organizations and colleagues, and there is potential for us to openly share our progress as we go from being a world class institution with a storage crisis to a world class institution leading in collections accessibility and care.