

## Client: Indiana State Library

### *Client's challenge or problem:*

The Indiana State Library is comprised of two sections: the original building built in 1932 and the addition that was completed in 1976. This project included the renovation of both sections along with a 10,000-square-foot addition. The area to be renovated was more than 50% of the building's 240,000 square feet. The goal of this project was to restore sections of the library that were beginning to show scars from 70 years of use and to bring the building's mechanical and electrical systems up-to-date along with wiring for data. Another goal was to make the library more accessible and user-friendly for its patrons by meeting ADA requirements and wiring the historic building for modern technology.

A major challenge the construction team faced during this project was that the library would remain occupied by 65 employees and library patrons during the renovations. The employees needed to move their offices as each phase of the project progressed. Other challenges included keeping the library's valuable collection safe. When seeking insurance for the replacement value of the documents contained within the library, Lloyds of London quoted a price of \$5 billion.

### *Hagerman's ideas or solutions:*

Following the award of this project, the construction team developed a multi-phased plan and a schedule to complete this project in a timely manner. Complicating the project was the need to update the mechanical, electrical and plumbing systems while keeping the old system running until the entire project was complete. This also included sprinkling the entire building and keeping the old system working until completion.



Site logistics proved to be a challenge due to the limited amount of space for storage during the phased project. The site is located in downtown Indianapolis and is surrounded by Ohio Street, Senate Avenue and the State Capitol Building. The construction team was allowed 3 storage trailers on site. Normally on a project this size, there would be 17-20 trailers on site. Due to the limited amount of storage space, we coordinated a plan with the 55+ subcontractors to move material in and out of the site on a monthly basis.

The project was divided into four phases. Phase one was the renovation of the basement that required the entire mechanical, electrical and plumbing system to be updated. One of the biggest challenges of this phase was installing a new air-handling unit in the basement. The second phase of the project was the renovation of floors 1, 2, 3 and 4 in the 1976 section and the addition of the new entrance on Ohio Street. The new entryway was book-matched and



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sequined to create a magnificent entryway into the library. In order to build the new entry for the library the limestone panels on the outside of the building were removed. More than 250,000 pounds of limestone panels were extracted over the course of a weekend. Each panel measured 4-5 feet wide and 10-14 feet tall and weighed between 4,000-6,000 pounds. The third phase was the restoration of the 1932 section's floors 1,2 and 3. This included the restoration of wood, sandstone and hand-painted murals, brass fixtures and terrazzo flooring and took five weeks to complete. The fourth phase was the renovation of the fourth floor in the 1932 building into office space. This final phase also included tying all the mechanical systems together.

*The Results:*

The restoration to the Indiana State Library has given the institution a new look that highlights the many Indiana materials that were used to build the original building in 1932. By refurbishing sections of the building, a state treasure has been restored. This was done without compromising the historic features of the original building.



This project is significant to the community for several reasons, including increased accessibility into and throughout the building, and also the materials housed in the library. It is much easier for library patrons to view hard-to-find records, such as birth, marriage and military papers. Prior to the renovation of the building, patrons had to view microfilm in three areas. Now the microfilm and genealogy materials are in one location.

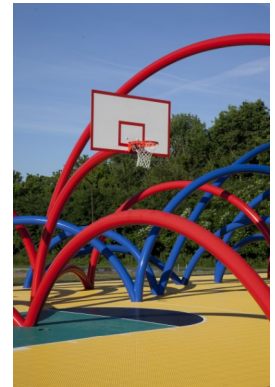
Upon visiting the library after completion, former Indiana Governor Frank O'Bannon said, "As a history lover, I was excited and pleased to see the new renovations at the Indiana State Library and Historical Bureau first hand. I was especially impressed with the work to preserve important state documents for all of history and I'm glad to know these documents and this building will be there for generations for future Hoosiers to share and experience."

## Client: IMA 100 Acres - Virginia B. Fairbanks Arts & Nature Park

### *Client's challenge or problem:*

The Indianapolis Museum of Art wanted to create a space to demonstrate to visitors the unique and reciprocal relationship between contemporary art and our natural environment. The 100 Acres: Virginia B. Fairbanks Arts and Nature Park is one of the largest in the nation, boasting 100 acres of woodlands, wetlands, a 35 acre lake and meadows situated behind the museum's existing 52-acre campus. The park is one of a few to host permanent and temporary art pieces commissioned by international artists that are responsive to the natural aesthetic of the area while providing a place for the Indianapolis community to appreciate the environment at no cost.

While the 100 Acres arts park is now a beautiful outdoor space with plenty of plants and trees for visitors to enjoy, the Indianapolis Museum of Art definitely did not inherit the land in such pristine condition. The 100 Acres lake that serves as a focal point for the arts park has been dramatically transitioned from its previous states as a gravel pit by the IMA. The woodlands surrounding this lake have also evolved through ecological succession, a process which the IMA horticulture team has worked tirelessly to facilitate for over a decade.



When approaching the construction process for the 100 Acres arts park, sustainability was not only a goal -- it was a necessity. The IMA placed a priority on employing green building methods for various elements of the park to minimize the effect on the natural landscape they had worked so hard to restore and preserve. The construction of the Visitors' Pavilion presented some challenges for the team because it was to be built in a floodplain. The Hagerman Group construction team faced some unique challenges with working at the remote site location and ensuring the process would have a small footprint on the land. Another minor challenge for the team was the budget, which can often be a challenge in a project of this scale and scope.

### *Hagerman's ideas or solutions:*

To address the sustainability needs of the owner, The Hagerman Group collaborated with the architect to develop unique solutions to their challenges. LEED-Accredited professionals with The Hagerman Group and Marlon Blackwell's architectural firm researched many sustainable building and design measures that would meet the high expectations of the IMA for the arts park. The architect took inspiration for the Visitors' Pavilion from the geometry of a fallen, folded leaf. The large, angular deck of the building folds back on itself to form the canopy above, both of which are constructed



to allow for the free flow of sunlight and rainwater and the unique visible steel structure of the building is reminiscent of the leaf's skeletal veins. The building is also carefully designed to inhabit the land's floodplain environment and allows for the free flow of occasional floodwaters around and beneath the structure.

The construction team provided expertise by recording detailed information about wood options for the Visitors' Pavilion, including: cost, schedule, unique characteristics and environmental impact. The team chose to use IPE wood -- sometimes referred to as Brazilian Hardwood. The use of this material was

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challenging from both a design and construction aspect. The team was able to collaborate to develop unique hangers and fasteners to achieve a look that suited the designer. Because IPE wood is one of the hardest woods in the world and cannot be pierced conventionally with a nail and hammer, it required the use of special saws and drill bits and had to be predrilled before it was brought on site. In addition to these environmental measures, the pavilion was built with a geothermal heating system, day lighting in every space and energy efficient window systems, which will reduce energy costs by 10%.



*The Results:*

Earning national attention since its opening in June 2010, more than 100,000 people have visited the arts park with many of them also taking time to visit the admission-free museum. This surge of visitors has allowed the IMA to educate many of those people on various art forms and topics, including the reciprocal natural of art and the environment. The social impact the arts park has had on the Indianapolis community is the result of the environmental impact the IMA has had on the 100 acres of abused urban land that has been transformed into an environmentally responsible space for visitors to enjoy for free. The space in the 100 Acres arts park is used for education, recreation and aesthetic purposes, which makes it an irreplaceable asset to the Indianapolis community. Walkers, joggers, bikers, photographers, artists, explorers, families and friends can be seen on any given sunny day at the new park enjoying the beauty of nature and art. This project displays significant achievements in sustainable engineering, construction, architecture, landscape architecture, public art and development.

This project won the Indianapolis Mayor's Sustainability Award in 2011 in the Land Category.

