National Trust for Historic Preservation®

January 9, 2013

From Power Plant to Climbing Gym: Adaptive Reuse at St. Louis' City Hospital

By:
Michael R. Allen

Today we're pleased to kick off a new series [Link: http://blog.preservationnation.org/tag/st-louis-city-hospital/] from guest blogger Michael Allen, founder and director of the Preservation Research Office [Link: http://preservationresearch.com/] in St. Louis. Over the next few weeks, he'll share the remarkable transformation of the power plant at St. Louis' City Hospital building -- the only historic power plant building in the United States that has been reused for a large-volume recreational purpose (in this case, a climbing gym [Link: http://climbsoill.com/] !).

Our hope: that Michael's example of inventive preservation from his hometown inspires you to look at your local places with new eyes and fresh ideas. So if you have any questions or insights during the series, please share in the comments! -- J.R.

Postcard view showing the completed group of Georgian Revival hospital buildings designed by Albert B. Groves, sometime after 1912.

The stately red brick Power Plant at City Hospital today stands as a testament to the transformative power of adaptive reuse. The building now houses an indoor climbing gym [Link: http://climbsoill.com] as well as two restaurant spaces currently being built out. Few traces remain of the building's long period of vacancy after City Hospital closed in 1985, and the boilers and generators that made this building an integral part of the hospital for 48 years have been removed.

Yet the form of the building, the lofty machine hall inside, and the building's tall smokestack appear much as they did when drawn under the supervision of municipal architect Albert A. Osburg as part of a Public Works Administration-aided reinvention of the crowded City Hospital into a modern medical facility serving the city's poor. After completion in 1937, the Power Plant has been a key part of the hospital's three phases of life: **service, abandonment, and renewal.**

In the Beginning: The Power Plant Site and the Evolving City Hospital Complex

The St. Louis City Hospital was founded on July 10, 1845 to serve the poor residents of

what was then a cholera-infested city. Located at the head of Soulard Street, now the infamous corner of 14th Street and Lafayette Avenue, the first building was partly finished by June, 1846, when patients started to move in.

Only 90 patients could be admitted at the time. A new hospital built later in 1857 housed 450 patients.

Bird's eye view of the original City Hospital Building, which had been built in 1845.

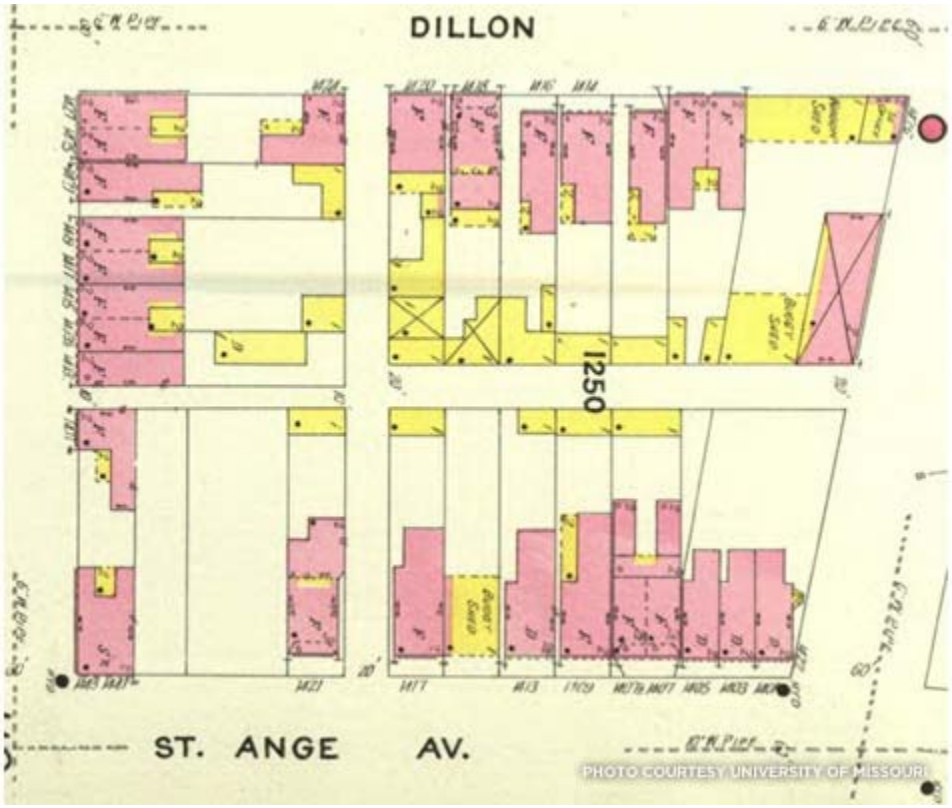
In 1872, plans were developed contemplating Mansard style buildings facing Lafayette Avenue, and calling for the removal of all original structures. However, only one new wing was built on vacant land to the west of the hospital.

North of the City Hospital was City Block 1250. Bounded by Dillon Street on the west, Park Avenue on the north, St. Ange Avenue on the east, and Carroll Street on the south, this block would someday be the site of the hospital's Power Plant. Building permits show a flurry of construction between 1878 and 1895 resulting in blocks densely built-out with two to three story brick dwellings and tenements, as well as a wagon shop and stable.

The Power Plant site was built out starting in 1878, when R. Germer built a two-story

brick dwelling on Dillon for a cost of $1,000. In 1881, M. Ludwig built a two-story brick dwelling at the northeast corner of Dillon and Carroll streets. The reported construction cost was $2,800.

Later additions to the site included a two-story brick stable built by F. Ziegler in 1891, and two-and-a-half-story brick flats built by Gertrude Reisch in 1891 for $3,400. A 1909 Sanborn fire insurance map shows eight two-family flats (tenements), with six in a row, facing Carroll Street and a freestanding tenement facing Dillon on the north. Seven more two-family buildings face Dillon across the alley.



The block upon which the Power Plant would be built as depicted on the Sanborn fire insurance map of 1908.

These buildings would have been built in common vernacular brick traditions, and the costs suggest fairly modest finishes compared to construction activity in Lafayette Square to the west. The names of all of the building permits for the block are decidedly German until the mid-twentieth century. By then, the great Cyclone of 1896 destroyed the hospital and led to the need for a new facility.

Construction began in 1898 on a group of buildings along Carroll Street with the

Hospital Commissioner's office building sited on Fourteenth Street. While the Board of Public Improvements was responsible for the design, drawings indicate that Building Commissioner James Smith, architect William Bond, and architect Albert Groves were involved in designing the eight buildings completed by 1908.

These original buildings, different as they were from each other in plan and function, were unified by a Georgian Revival style that used formal fenestration, low hipped roofs, tall openings containing six-over-six windows, brick quoins on the corners, and decorative stonework.

The City Hospital experienced severe damage during the tornado that struck St. Louis on May 27, 1896.

The five-story Administration Building and its flanking ward wings, which were built between 1910 and 1912, also followed the Georgian Revival style. Groves, then officially serving Architect for the Board of Public Improvements, designed the buildings. These imposing buildings faced Lafayette Avenue, and today remain a major landmark on the near south side.

Grove detailed the buildings similar to those earlier City Hospital buildings, but he

imposed symmetry on the arrangement that added a formality to the hospital's entrance. The Administration and ward buildings defined the style of the hospital, and later additions would continue to make use of the style, detailing and materials used by Groves.

For a hospital dedicated to serving the city's indigent, the dignified and modern architectural appearance of the facility would have been reassuring. Still, over the next thirty years, the demands for care and the allocations from the city's general revenue did not always meet...

Next week: Modernizing City Hospital and the Power Plant Building

National Trust for Historic Preservation®

January 16, 2013

Modernizing St. Louis' City Hospital and the Power Plant Building

By:
Michael R. Allen

Part 2 of our guest series on the remarkable transformation of a hospital power plant in St. Louis. Last week detailed how the hospital complex developed; today's post explores its expansion phase in the early 20th century. Read the series to date [Link: http://blog.preservationnation.org/tag/st-louis-city-hospital/] .

The Power Plant in 2008.

Modernizing St. Louis' City Hospital and the Power Plant Building

Overcrowding at the City Hospital led the city's Hospital Commission to find funding as early as 1930 to expand the facility. With a variety of bond issues backing the project, **the first buildings planned were a new psychiatric ward for City Hospital, the Malcolm Bliss Psychopathic Hospital, and a new modern power plant.**

A grant from the Public Words Administration in 1939 allowed Albert Osburg, Chief Architect of the Board of Public Service, to design a master plan for the hospital's growth that included a 14-story addition, completed in 1942 as the Tower Building, as well as Laundry and Ancillary Services buildings. (The designs of all of the buildings designed in the 1930s can be attributed to Osburg given his supervising role in the Board of Public Service, although plans do not always list the name of any architect.)

The interior of the Power Plant in 2000. Photo taken for the City Hospital Historic District National Register of Historic Places nomination.

In his service to city government, Osburg supervised the design of many significant public buildings. One of Osburg's early works was the plan for Soulard Market (1928), which derived its Renaissance Revival design from Brunelleschi's renowned Foundling Hospital in Florence. Osburg embraced the Art Deco movement in American architecture in designing Depression-era public buildings, including a series of six one-story police district stations built between 1936 and 1938 and four community centers in African-American neighborhoods funded by a 1934 bond issue.

Osburg's public works masterpiece was the Homer G. Phillips Hospital (1936) in the Ville. Built as the city's African-American Hospital, Homer G. Phillips was based on an X-shaped plan similar to Osburg's Malcolm Bliss Psychiatric Hospital at City Hospital (1939). Yet the buildings of Homer G. Phillips Hospital made use of polychrome buff brick, red Missouri granite, geometric buff terra cotta and red clay roof tile to express a style that embraced the modern era while maintaining traditional material craftsmanship.

View toward the Power Plant during the City Hospital modernization project.

Osburg's work at City Hospital maintained the Georgian Revival style established by the earlier buildings, despite the change in architectural fashion that the city embraced with contemporary projects. The Power Plant would be the most modern building in the hospital expansion.

Drawings for the Power Plant bear Osburg's name, making him the definite designer. He designed an irregularly massed building with a stepped three-story section with attic rising at the east, a low one-story section at the west and a massive brick smokestack at the north end. Details includes:

The structure of the building was steel, but the exterior cladding was red brick.

The west elevation has rusticated brick, large openings containing multi-light windows (originally steel) and limestone ornamental elements.

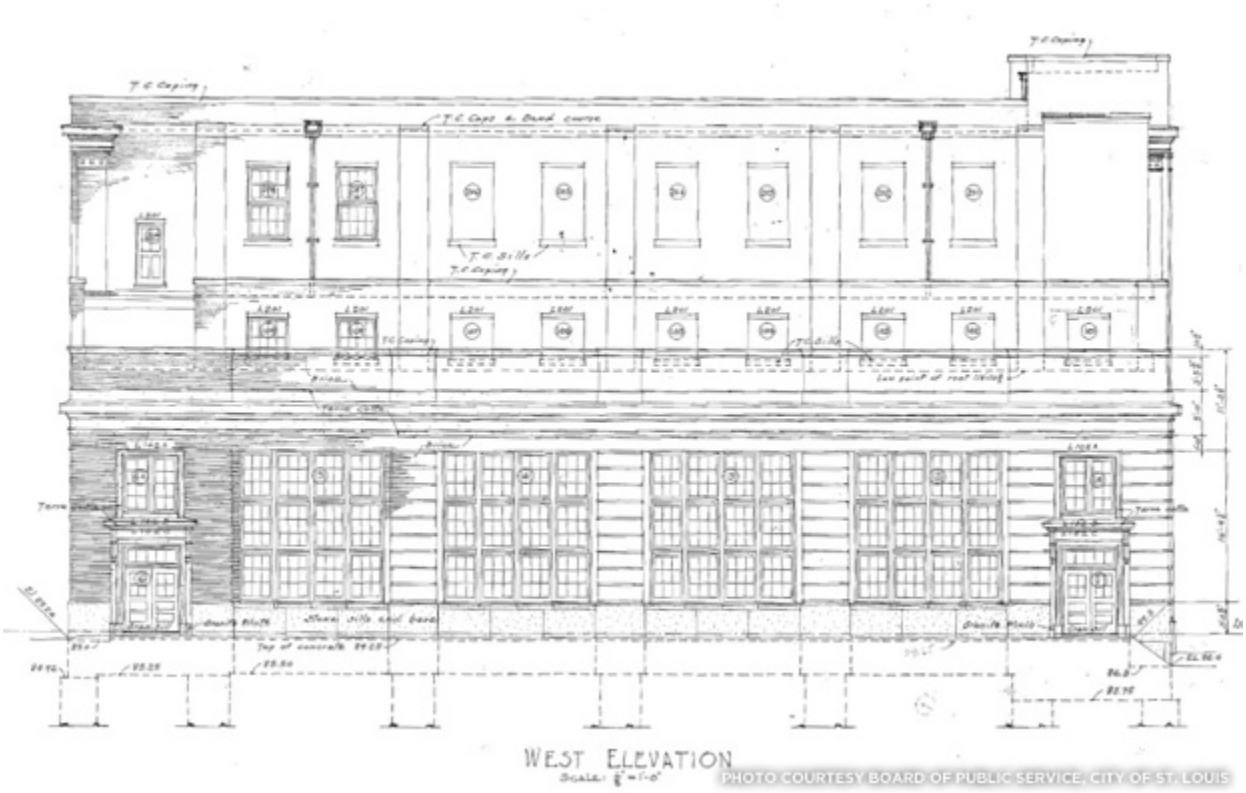
The four large window openings define the character of the building, and are also found at the first level of the taller eastern section.

Above the rusticated first floor on the eastern section, the wall has smaller window openings consistent with earlier hospital buildings, and even keystones above

them.

Stone cornices run as belts above the first and third levels, and seven brick pilasters with stone capitals frame the eastern wall bays.

The irregularly fenestrated south elevation shows the three-step building profile while maintaining the building's decorative scheme, while the north elevation is informal.



West elevation as drawn on the plans for the Power Plant.

And as with any modern industrial building of the era, the contrasting building elements correspond to different functions:

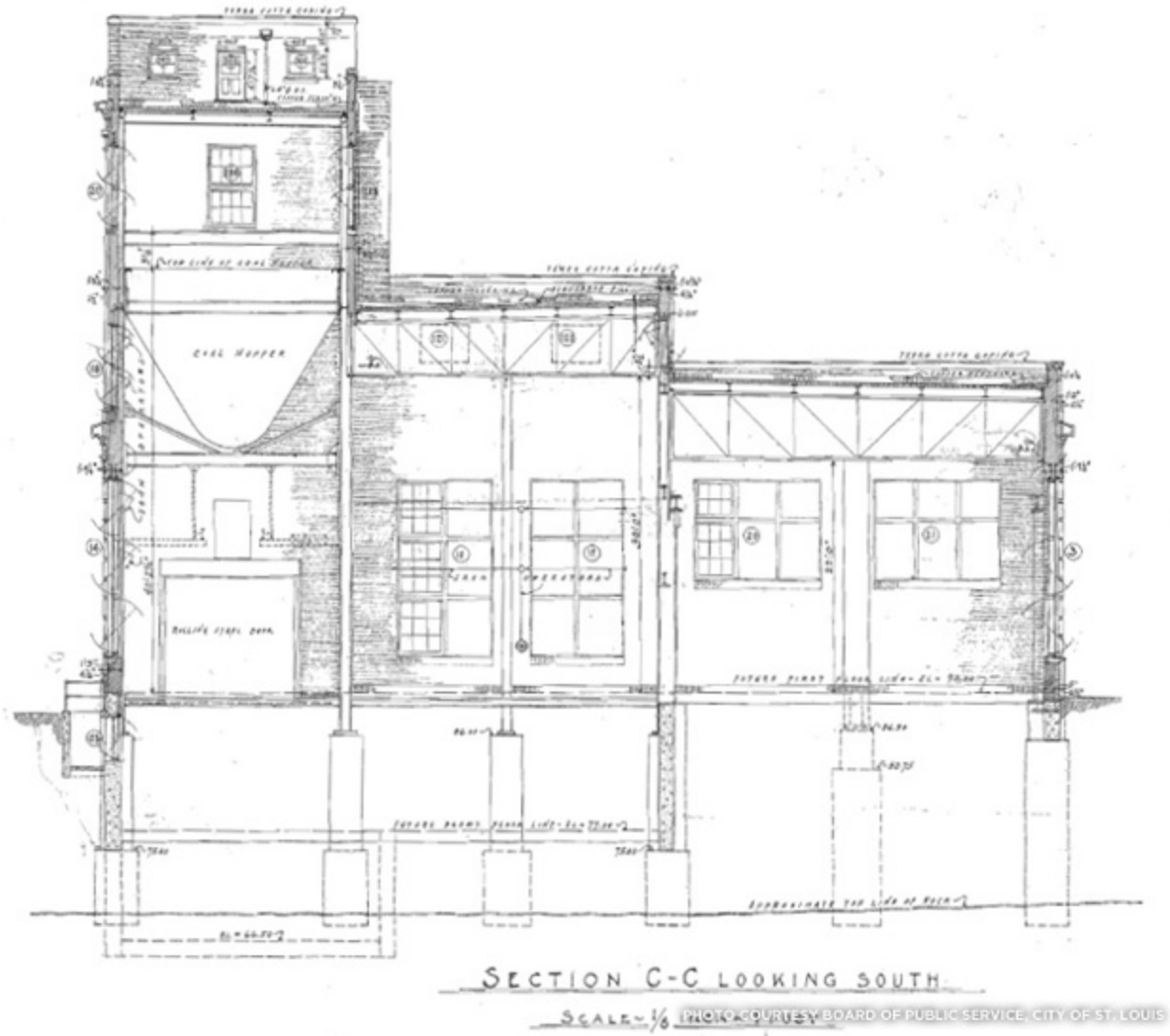
The low western section housed a large generating machine room, serviced by an overhead Shaw-Box bridge crane manufactured by Manning, Maxwell & Moore of Muskegon, Michigan.

The center section of the building, slightly taller than the west, contained an open boiler hall.

The tall eastern section had separated basement and attic levels, with its open main level volume built out with a three-level steel catwalk system around four massive coal hopper structures that were 56 ½" tall.

Steel trusses carried the roof spans over the large column-free spaces created in the three sections of the building. The footprint of the building was 89' 7 ½" by 120'.

All in all, the Power Plant design navigates between a functionalist expression of use and space, as the large windows demonstrate, and an aesthetic reverence toward the traditional Georgian Revival design of the older hospital buildings. Osburg's navigation is successful, and makes use of contrasting building volumes to unify the artistic divergence through a powerfully shaped mass.



Cross section of Power Plant showing the spatial divisions inside.

When the new Power Plant went into service in 1937, the hospital expansion was about to be fully underway. The Malcolm Bliss building was nearing completion to the west. Two years later, the new Laundry Building was rising immediately to the west. These new buildings were the first hospital buildings built in the mostly-residential area north of Carroll Street. Across Carroll at the main campus, in 1939 the city had demolished the older surgical and observation wards for construction of the new Tower and Ancillary Services buildings.

Although the city's recovery from the Great Depression was slow, the modern physical plant of City Hospital was a source of civic pride displayed on popular postcards. The Power Plant was essential to the needs of the expanded facility.

The City Hospital after modernization and expansion in 1941.

As time went on, the city consolidated parcels around City Hospital for future expansion and employee parking. Building permits show that the city started removing the remaining residential buildings from the Power Plant block with a permit issues on April 1, 1959, which allowed the city to remove the dwellings located at 1401-17 St. Ange Avenue.

The city next wrecked dwellings at 1410-20 Dillon Street with a permit issued on June 17, 1964. In 1966, the city spent $20,000 to replace and repair windows on the power plant. At this point, the steel windows in the boiler room facing Dillon Street were replaced with glass block.

The city kept the Power Plant in great condition throughout the hospital's operation, with constant maintenance and repair. Yet the hospital's days were coming to an end …

Next week: In Limbo: City Hospital's Closure and the Unrealized Plan for the Power Plant

National Trust for Historic Preservation®

January 23, 2013

In Limbo: City Hospital's Closure and the Unrealized Plan for the Power Plant

By:
Michael R. Allen

Part 3 of our guest series on the remarkable transformation of a hospital power plant in St. Louis. Last week detailed how the hospital complex modernized over the first half of the 20th century; today's post explores how the second half brought closure and neglect. Read the series to date [Link: http://blog.preservationnation.org/tag/st-louis-city-hospital/] .

The Power Plant's windows were missing by 1994.

The closure of Homer G. Phillips Hospital in 1979, along with gradual cutbacks in Saint Louis and Washington University medical student interns, increased the burden on City Hospital. Mayor Vincent C. Schoemehl, Jr. set up an Acute Care Task Force to study the hospital in 1983, strongly hinting that he wanted to see the hospital closed. Frustrated, the task force soon voted themselves out of existence.

That same year, Schoemehl told the *Saint Louis Globe-Democrat*, "We are shooting for a November 1st [1983] close date. City Hospital is finally so far out of repair that it cannot continue to operate." But others, especially African-American members of the board of aldermen, balked at the idea of shutting down the city's last public hospital.

The Power Plant sits vacant in 1992.

Although the hospital didn't close until June 1985, Schoemehl eventually got his way. The city and county became partners in a new hospital, St. Louis Regional Medical Center at 5535 Delmar Boulevard. For a year after City Hospital's closure, the clinic at the old hospital operated during working hours on weekdays.

In June 1986, the city opened bids for the hospital. Pantheon Corporation, the flagship of Fox Theater developer Leon Strauss, bought the hospital by beating out other offers, including one from homeless advocate Reverend Larry Rice, who wanted to turn the complex into a center for the homeless. Pantheon planned a mixed-use development with condominiums as the main use of the property, but had difficulty getting the project started.

The Power Plant can be seen at left of this view of the abandoned City Hospital complex in 2000.

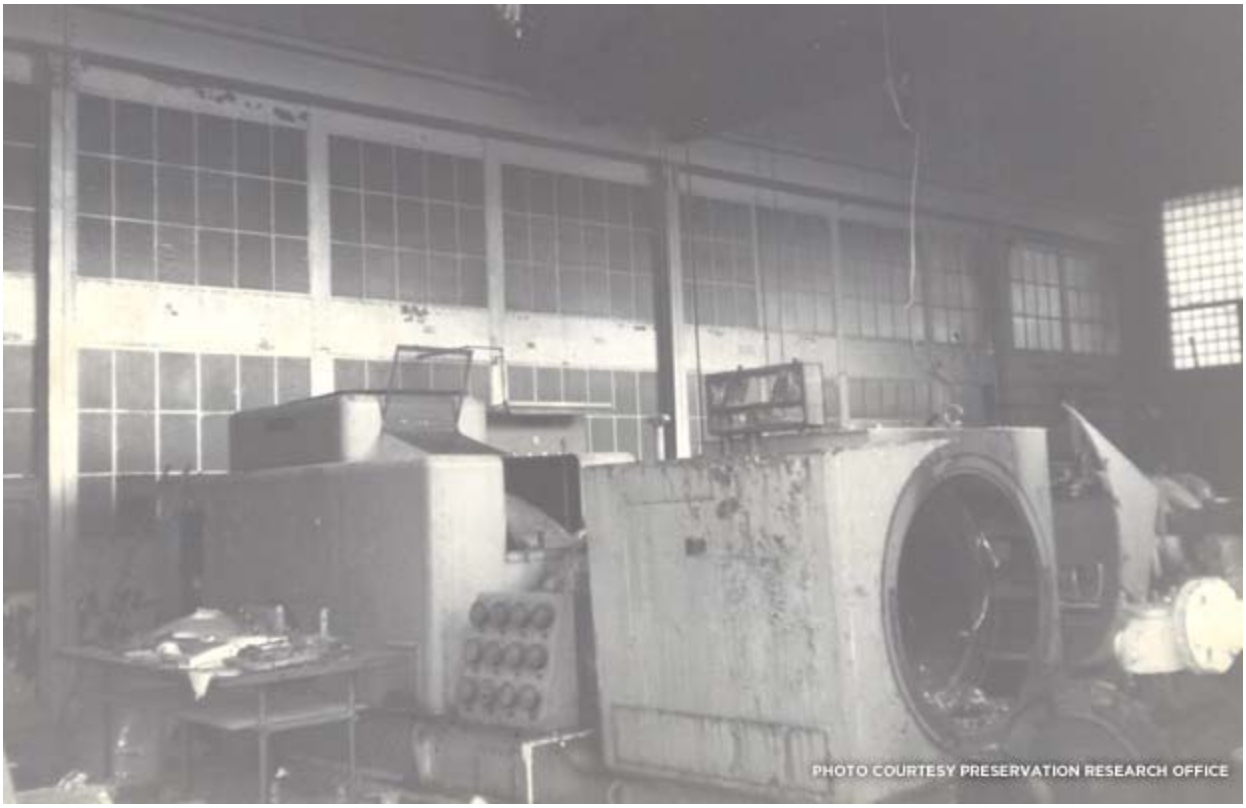
Despite the conditions at the hospital building that made renovation difficult, the Power Plant's physical condition remained excellent. **Based on evidence suggesting that the facility could remain in use, the city sold the Power Plant separately from the rest of the complex.**

Trigen Energy Corporation purchased the power plant from the City of St. Louis in 1986, and planned to convert the facility into a steam plant serving downtown St. Louis. Those plans were never realized, and Trigen eventually purchased the larger Ashley Street Power House (1903) on the north riverfront while returning the City Hospital Power Plant to the City of St. Louis.

With its cupolas stripped and walls tagged with graffiti, the Administration Building sits vacant in 2001.

For the next few years, City Hospital sat empty (except for trespassers). Vandals began sacking the hospital for all of its valuable copper: pipes, wiring, and, of course, the decorative cupolas on the roofs of the Administration and Ward buildings. By late 1988, most of the copper was missing from the cupolas, which stood on the roofs of five-story buildings. The Power Plant was relatively secure through this period.

In 1992, Pantheon's successor returned the City Hospital to the city's Land Reutilization Authority. The city considered many options for the complex, including demolition.



The interior of the Power Plant in 2004.

Then, in 1999, the city assigned redevelopment rights to the City Hospital Redevelopment Corporation, which proposed a $28.2 million renovation that preserved all of the hospital's historic buildings except the Tower and the Malcolm Bliss buildings. **In 2001, City Hospital was listed in the National Register of Historic Places -- a designation that honored the institution's social and medical history while making state and federal historic tax credits available.**

By 2004, renovation of the Administration Building and ward wings was underway, with other buildings following…

Next week: The Power Plant Renovation: Imagination Becomes Adaptation

National Trust for Historic Preservation®

January 30, 2013

The Power Plant Renovation: Imagination Becomes Adaptation

By:
Michael R. Allen

This is part 4 of our guest series on the remarkable transformation of a hospital power plant in St. Louis. Last week covered the plant's closure and deterioration, but today's post shares its exciting rebirth. Read the series to date [Link: http://blog.preservationnation.org/tag/st-louis-city-hospital/] .

The Power Plant after renovation.

In 2010, the long-awaited renovation of the Power Plant building began, centered on finding a new use for the purpose-built structure. Developer Chris Goodson of Gilded Age [Link: http://www.gilded-age.com/index.html] partnered with Environmental Operations, Inc. [Link: http://www.environmentalops.com/] to complete the renovation, and together they found an ideal match: Climb So iLL [Link: http://climbsoill.com/] , a climbing gym looking for the ultimate home.

The innovative reuse plan came from a team of energetic young minds. Climb So iLL was a partnership of brothers David and Dan Chancellor and their boyhood friend Ian Anderson, who were all longtime climbers. David and Dan had started the climbing gear company, So iLL Holds, in De Soto, Illinois, and later brought Ian into the business.

Construction during renovation.

Climb So iLL's spatial requirements hinged on large open spaces with the potential for installation of tall walls. After over a year of scouting sites for a gym that could offer everything from introductory to advanced climbing, the trio found the power plant. **The gym's partners enthusiastically signed a lease as the first occupant of the Power Plant in 26 years.**

After deciding to invest in the city, the group got the county involved, too. Climb So iLL utilized a $30,000 second-place award from the 2011 St. Louis County Economic Council's Business Plan contest to help develop the business side of the project. The project also used state and federal historic credits, brownfields tax incentives [Link: http://www.epa.gov/brownfields/tax/ti_faq.htm] , and $4 million in tax increment financing.

Design for the $22 million rehabilitation came from UIC/CDO [Link: http://uicstl.com/] , a local firm headed by Brent Crittenden and Sara Gibson. The dazzling space required a visually expressive approach to building the walls. Climb So iLL also worked with internationally-acclaimed climbing wall company Walltopia [Link: http://www.walltopia.com/] to collaboratively design brightly colored birch plywood

shapes that float and rise through the Power Plant without upstaging its dynamic industrial character.

Before and after Climb So iLL's renovation.

Now, where power plant machinery once stood, there are 10,000 square feet of climbing walls. Wall heights range from 25 to 55 feet, with skill levels from beginner to elite. There are walls shaped like a boulder, an elephant (children's wall), an eyeball (freestyle unharnessed bouldering wall), and a tulip-of-sorts (beginner wall).

Alongside Climb So iLL's bright and active gym, the Power Plant will soon offer more casual options for recreation. Two restaurants are planned for the top floor of the three-story building. From inside, diners will have what may be the best view of the Gateway Arch and downtown skyline in the city. Terraces on the west will offer views of the Lafayette Square neighborhood.

In the meantime, Climb So iLL enjoys the unique distinction of saying on its website [Link: http://climbsoill.com/page/location/] : "Our facility is part of the historic City Hospital complex and occupies the former Power Plant building. Our neighbors at The Georgian Condominiums, Butler's Pantry, and The Palladium St. Louis have helped

revive this beautiful and historic district making it a truly unique, urban destination. **Look for the smokestack.**"

Next week: Learn about other adaptive reuse projects in cities around the world -- and discover why the Power Plant is unique.

National Trust for Historic Preservation®

February 6, 2013

Historic Power Plants: A Tricky (But Rewarding) Resource to Adapt

By:
Michael R. Allen

This is the final installment of our guest series on the remarkable transformation of a hospital power plant in St. Louis. This week looks at other American examples of power plant reuse and examines what makes the City Hospital project unique. Read the series to date [Link: http://blog.preservationnation.org/tag/st-louis-city-hospital/] .

Seaholm Power Plant in Austin, Texas.

The Power Plant at City Hospital is the only historic power plant building in the United States that has been reused for a large-volume recreational purpose. Power plants remain difficult buildings to reuse due to their large open volumes, which have to be retained to some extent to qualify for historic tax credits.

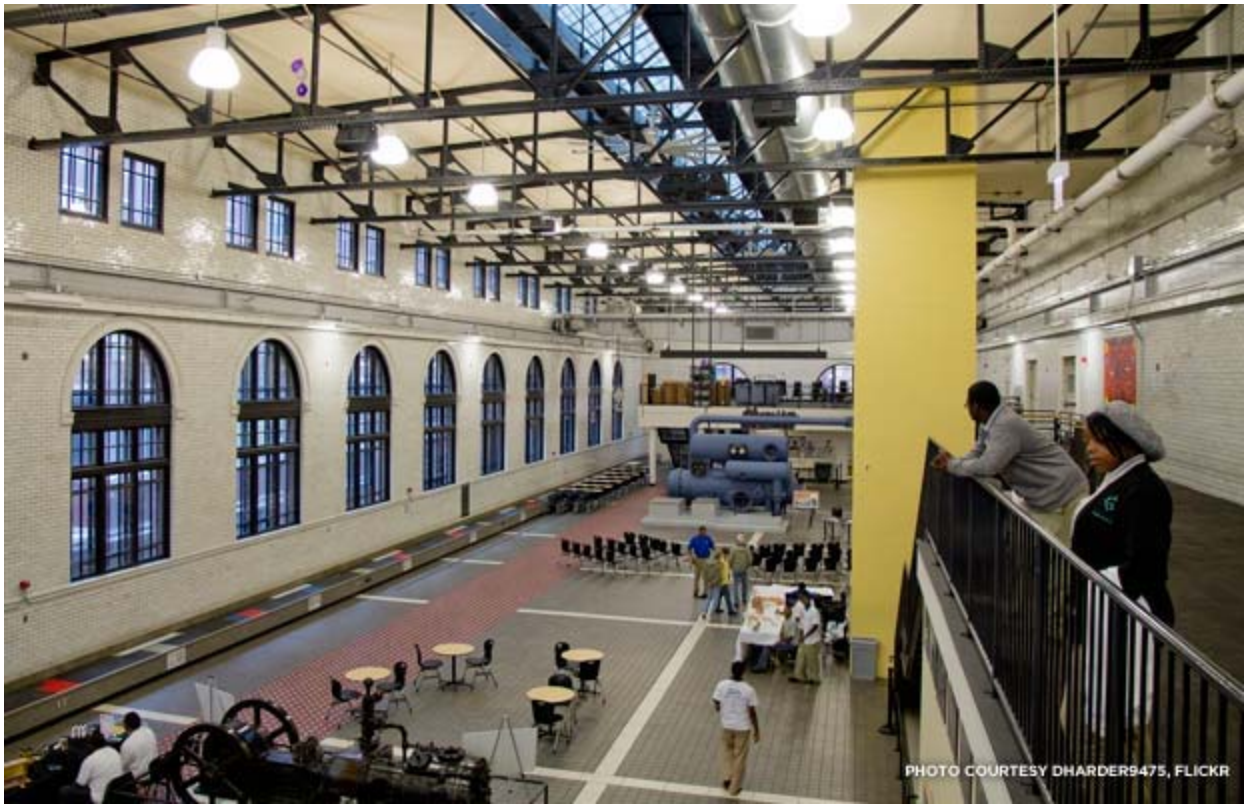
A survey of adaptive reuse projects at historic American power plants shows that they tend to be used for office, retail and even residential space. It's common for floors to be added in these configurations, making it even more significant that the City Hospital Power Plant retained its original space.

In Austin, Texas, a plan to reuse the Seaholm Power Plant [Link: http://www.seaholm.info/] may become the nation's next adaptive reuse project for a power plant building. The plan calls for a 7.8-acre historic power plant becoming a sustainable, mixed-use, adaptive reuse development. The original 1950s Art Deco building will be adapted into commercial, retail, exhibition, and residential space.

Inside Cannon Design's renovated office in the Municipal Service Building power plant.

In St. Louis, Cannon Design has adapted the former Municipal Service Building power plant [Link: http://www.cannondesign.com/practice/profile/locations/st-louis/] -- a finely detailed Renaissance Revival building designed by the firm of Study & Farrar -- into an impressive office space. Built in 1927, the 19,000 square foot power plant had been vacant 25 years when the $8 million Silver LEED renovation started. (The project also received state and federal historic rehabilitation tax credits.)

The interior's four-story open volume, illuminated through large full-height arched steel sash windows, posed a challenge. Cannon's solution: insert a free-standing block of three floors to handle work space, set back from the outer walls to allow for some sense of volume to remain. The end result is 32,000 square feet of usable office space.



Overlooking the Great Room at the Charles H. Shaw Technology and Learning Center in Chicago.

Around the same time that Cannon Design's new office opened, the Charles H. Shaw Technology and Learning Center opened in Chicago in a former Sears, Roebuck and Company power plant built in 1905. Completed in 2009, the renovation created classrooms, a learning facility for high school students, and community spaces while retaining the power plant's historic exterior, including original wooden windows. This project received federal historic rehabilitation tax credits.

An earlier adaptive reuse that has continued to be successful is the Pier Four Power Plant [Link: http://en.wikipedia.org/wiki/Pratt_Street_Power_Plant] (or Pratt Street Station) in Baltimore developed by Cordish. Built between 1900 and 1909, the power plant served electric street railways. Today, the Pier Four Power Plant is activated with commercial and entertainment tenants. Although an indoor Six Flags was located here from 1985 through 1989, there was no active-use recreational component, and today the interior is carved up by multiple users.

Sunrise over the Pier Four Power Plant in Baltimore.

With all these examples in mind, **the City Hospital Power Plant stands today as one of only a few American power plants to find adaptive reuse, and the only that has been dedicated to a recreational use.** When first built, the power plant embodied a massive federal effort to curb the effects of the Depression. Years of service to a busy public hospital were followed by years of abandonment and neglect. Yet the original purpose of the power plant remains apparent in its indelible design, enhanced and respected through its new use as a recreation and entertainment destination.