

Rebekah Mayer

5 A Fire Hall Reused for Windsor Public Library's John Muir Branch in Ontario, Canada

Abstract: In 2016, the Windsor Public Library Board (WPLB) purchased an abandoned historic fire hall and stable and through an extensive and challenging adaptive reuse project, opened the John Muir Branch in September 2019. Designed by architect, composer and heritage professional Jason Grossi, the space offers unique acoustics and modern aesthetics that honour the original character of the heritage building. The case study considers the challenges faced in revitalising the building and how the public library has provided an innovative space to support the needs of the community and 21st century library users.

Keywords: Library buildings; Fire stations – Remodelling for other use; Public libraries – Canada

Introduction

Library design is a constantly evolving discourse in library science and offers vast opportunities for re-imagining libraries and the ways in which customers interact within public spaces. With information access adapting to the digital age, public libraries are tasked with the challenge of discovering ways to move beyond perceiving the library as simply the third place. This chapter presents an experience-based case study of a Canadian library's daring response to the changing nature of public library spaces through adaptive reuse.

In 2016, the Windsor Public Library Board (WPLB) saw an opportunity for growth and revitalisation in an abandoned 1921 fire hall and mid-19th century stable on the city's west side, an area home to a diverse and changing community. Through an extensive and challenging adaptive reuse project, the WPLB opened the John Muir Branch in September 2019. Designed by architect, composer and heritage professional Jason Grossi, the space offers unique aesthetics and acoustics that honour the original character of the heritage building as it meets the needs of 21st century library users. Its conceptual design includes significant attention to detail, drawing inspiration from the original materials and architecture of the fire hall and stable (Figure 1). As a city with growing international student and new Canadian populations, Windsor, Ontario, is lacking in affordable and accessible public spaces and programmes. The John Muir Branch



Fig. 1: Exterior of Windsor Public Library's John Muir Branch. © Jason Grossi, Studio g+G inc.

Facts and Figures

Name: Windsor Public Library – John Muir Branch

Address: 363 Mill St., ON N9C 1B1, Windsor, Ontario, Canada

Website: https://www.windsorpubliclibrary.com/?page_id=65805

Opening: September 2019

Builder: Intrepid General Ltd.

Architect: Jason Grossi, Studio g+G inc. <http://designstudiogg.com/>

Gross floor area: 7,400 sq ft

Main floor space: 4,000 sq ft

Collection size: 14,043

Staff: 4.5

Workstations: 6

Building costs: CA\$5,483,000

has the potential to pave the way for outreach to previously under-represented demographic groups by offering them a diverse and welcoming space. Since opening, the library has inspired innovative additions to Windsor Public Library's established programming. In reviewing articles and reports, and conducting interviews with the library staff, administration and the lead architect,

this chapter focuses on the challenges faced in revitalising the former fire hall and on how the design of the John Muir Branch is reshaping the future of spaces and programming at Windsor Public Library (WPL).

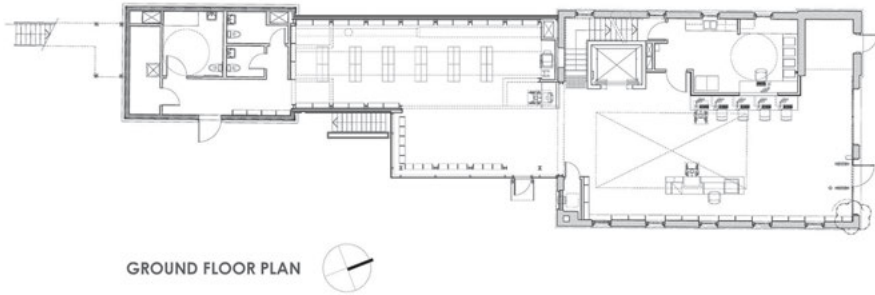


Fig. 2: Ground floor plan. © studio g+g architecture.

Windsor, Ontario and the Sandwich Town Neighbourhood

Windsor, Ontario is a mid-sized Canadian city bordering the United States. With 217,188 citizens, Windsor continues to grow annually from an influx of domestic and international students and individuals and families moving to Windsor for more affordable living. In addition to Canada's official languages of English and French, there are over 100 languages spoken by Windsor residents at home (Statistics Canada 2017). Windsor's population growth tops the national average, and the city is the third fastest growing in Canada (Statistics Canada 2019). Its population growth combined with population diversity has resulted in an amalgamation of demographic groups comparable to those of larger North American cities, and the fostering of unique neighbourhood communities. The WPLB operates nine branches. Sandwich is a historic neighbourhood within Windsor and is served by the John Muir Branch. Almost 30% of residents served by the John Muir library are 20–35 years old with a median age of 33.9, younger than the city's average of 41.2 (City of Windsor Planning Department 2018). The cost of living in the city centre remains high compared to other neighbourhoods and, as a result, students and young professionals are opting to live on the west side. More than half of the residents in Sandwich Town are renters, higher than the city's average of 36% (Statistics Canada 2017).

Sandwich experienced a period of decline with the exodus of key functions to alternative locations within Windsor in the latter part of the 20th century. Building vacancies became widespread leaving the area in a sorry plight and lacking in core amenities. Yet it has the potential to be a vibrant neighbourhood situated at the base of the Ambassador Bridge connecting Windsor and Detroit. The community prides itself on its culture and history. The WPLB's decision to take ownership of the neglected fire hall and stable was met with widespread support. The project demonstrated the residents' dedication to fostering connections and community building while respecting and supporting the existing culture in the neighbourhood.

Acquisition of Fire Hall No. 6 and the Stable

Windsor Public Library (WPL) has had an active presence in Sandwich Town for almost a century. The neighbourhood's growing population created a need for a larger library to serve the existing community while providing outreach opportunities to new residents. In 2013, the City of Windsor and WPLB announced the decision to reuse and adapt Fire Hall No. 6 in Sandwich Town for a new library. The branch would be named after lifelong library supporter and President of the Friends of Sandwich Library, John Muir, who advocated for a strong library presence in the area. The property included the fire hall, designed in the classical revival style by architect Gilbert J. P. Jacques and completed in 1921, and the stables at the back, believed to date back to the mid- to late-19th century (Figure 3). The buildings had served as Sandwich Town's fire station until 1964 and subsequently housed a variety of public and community programmes, including a detoxification centre and an art studio, before being abandoned. The building was offered to the WPLB by the City. Mayor Drew Dilkens saw a unique opportunity for the creation of a sustainable public library space through adaptive reuse and restoration.

From Old to New

Following the decision to use the building, WPL's CEO, Kitty Pope, recalls seeing the interior for the first time. "It was so dark, I got halfway into the building and all I could see was eyes staring back at me. There were raccoons everywhere." said Pope in an interview in 2019. It was obvious the branch could not be functional as a full, two-storey building. First, to maintain sight lines for staff and to

open up the space, a hole would need to be cut out of the second floor, creating a mezzanine. Second, because the stable was a significant distance from the fire hall itself, the two buildings needed to be connected in some way.



Fig. 3: View of Fire Hall No. 6 before renovations. © City of Windsor, Nancy Morand.

Because the fire hall and stables constituted a building site located within the Sandwich Heritage Conservation District, certain requirements had to be met to maintain the cultural and historical value of the buildings (City of Windsor 2012). A fire in 1941 destroyed a significant portion of the second floor and part of the hose drying tower but most of the building's original design was restored in 1945. The fire hall featured architectural styles that were characteristic of the period. Notable details include a hipped roof on the tower, two large bay doors at the front of the building and multipaned windows surrounding the building's second floor. Fire Hall No. 6 was important to Sandwich Town's history before it merged into the greater city of Windsor. It was the last fire hall and stable left in the city.

Jason Grossi of Studio g+G Architecture was selected by the city to redesign the heritage structures (Studio g+G Architecture 2020). Grossi sat down with the WPLB to discuss options for the branch, driven by his considerable experience with historic buildings and adaptive reuse projects. The plan was to design a building that could change over the next fifty years. Unlike some contemporary buildings, the fire hall was built to last. The adaptive reuse took this into consideration, creating a balance between the operational needs of a 21st century library and the shifting information needs of future generations.

In his architectural design, Grossi considered numerous aspects. Ultimately, he hoped to design a library that “did not intrude onto the stable and the fire

hall but rather explained the history of the buildings; a metaphysical link”, as he wrote in personal correspondence. The challenge existed in piecing together two buildings from different time periods with their own “stored memories and visual scars”. The resulting design journey was one where architectural ideology was enhanced by a flexible, multilateral process. Grossi’s dedicated approach established a successful shift from a neglected historic building to one that will have continuing use in the future. In piecing together the two buildings, Grossi successfully combined four different time periods to provide the community with a meticulously designed public space that offers limitless possibilities.

Experiences, Challenges and Lessons Learned

The early stages of the project progressed smoothly with the support of Windsor’s Mayor, Drew Dilkens. Without a viable use, the buildings risked falling further into decay, requiring significant maintenance in the future or demolition. The City Council supported the CA\$5,482,885 restoration project with Dilkens arguing, “If the city isn’t prepared to step up and save historic buildings, particularly in Sandwich Town, why would we expect others to do the same?” (Cross 2017).

It is difficult to understand the challenges of the John Muir Branch project fully without considering the commitment and passion of the project team during the planning and construction process. The adaptive reuse of an old building has obvious, predictable challenges, especially when the building had been neglected for years. While some challenges were expected, others resulted in significant changes to the WPLB’s original plans. However, as WPL CEO Kitty Pope commented when interviewed on the changes, “Good public library design is always a wise investment. It attracts customers and connects the community.” With the branch successfully opening and beginning operations in September 2019, members of the project team reflected on the challenges and lessons learned during the adaptive reuse project.

In retrospect, the project was extremely challenging for a building of its size: 7,400 sq ft on three levels. As already noted, the site was located within the Sandwich Heritage Conservation District, an area designated in October 2012 (City of Windsor 2012) under the Ontario Heritage Act (Ontario 2009). To preserve the historical and cultural value of the buildings, restoration or adaptive reuse must ensure the exterior of the buildings maintain any essential architectural characteristics of the period in which they were built.

The conceptual design process was complex; two buildings from different periods had to be connected by a contemporary architectural piece. Grossi’s

design approach was to “deeply investigate the site, the buildings, their history, and then allow the design process to evolve as if the buildings continue to graft themselves into the current time.” An additional challenge was designing a new space to fit within the fixed dimensions and varied foundation elevations of the fire hall and stable, much of which could not be changed due to the historic building designation. After careful consideration, the buildings were connected by a modern bridge (Figure 5). The floor elevation issue was resolved with the construction of a new foundation and the upper levels of the two buildings were linked with a suspended walkway on a slight incline. Grossi’s experience as a heritage consultant was instrumental to the success of the design approach.



Fig. 4: The design fused the two buildings with a modern addition. © Jason Grossi, Studio g+G inc.

The soil on the building site was sandy and of poor quality and haunted the team throughout the project. The lack of a basement, combined with the poor condition of the soil, had major implications for the installation of an elevator, required by law under the Accessibility for Ontarians with Disabilities Act, 2005 (<https://www.ontario.ca/laws/statute/05a11>). The foundation required underpinning and shoring to ensure proper support of the elevator shaft and structure, which added time and cost to the project. Taking these factors into account, the project went forward based on the city’s protocol for contracting services tenders. Three of Windsor’s major contractors put in a bid and Intrepid General Limited was selected. The bidding price was significantly higher than the original 2013 budget due to the unforeseen construction requirements caused by the soil conditions. With careful review of the added costs, City Council approved the additional funding for the John Muir Branch.

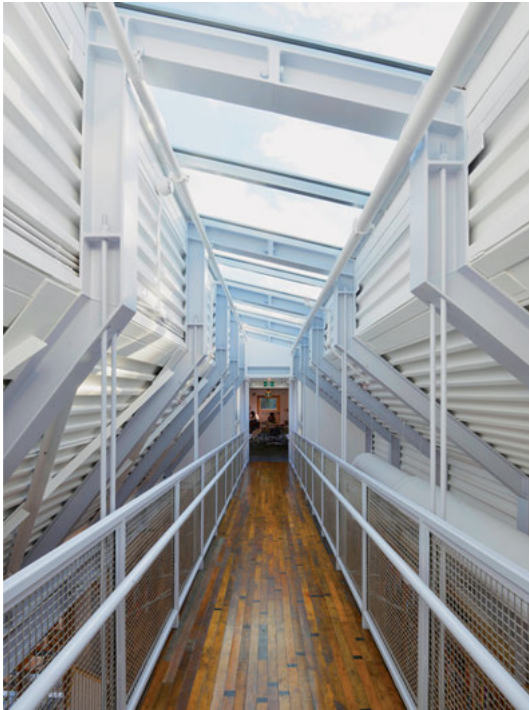


Fig. 5: The bridge linking the buildings. © Jason Grossi, Studio g+G inc.

Looking back on the experience, the project team acknowledged the difficulties that arose from the unique challenges but appreciated the considerable support and lessons learned. Jason Grossi’s architectural approach to the fire hall and stable provided the necessary flexibility which was integral to successful design and planning for the branch. The outcome would have been different without the support of everyone involved in the process, both directly and indirectly. The result speaks to the successful collaboration between the project team and city administration. When considering major lessons learned during an interview in 2019, WPL CEO Kitty Pope suggested that any time a heritage building is involved, “the budget should be doubled, really. It’s not about the cheap way out”. Renovating the heritage building for adaptive reuse was complex; managing expectations and being flexible when necessary were crucial to the success of the project. The WPL system will be going through more changes in the future and the experiences throughout the John Muir Branch project provide lessons for future projects. “Everything we’ve learned now will dictate how we approach the next project, whether it’s an adaptive reuse or a new building,” said Pope.

The Outcome

The John Muir Branch project took twenty months to complete. After overcoming the many challenges that arose during the planning and design stages, the foundation was secured, restoration completed, and the final touches were made to the exterior and interior. The finished space pays tribute to the original buildings with accurate restorations, innovative design and attention to detail. The exterior of the library maintains the character of the original structures based on guidelines provided by the Ontario Heritage Act (Ontario 2019). The stable includes the original roof, which was preserved during the restoration process. The frame and foundation of the stable, however, were found to be structurally unsound during the early stages of construction and were rebuilt. The exterior features white cedar shiplap siding coated in a limewash finish. The modern space connecting the stable to the fire hall uses glass, metal and wood accents, creating a strong architectural element that blends in with the two buildings (Figure 4).

The front of the library is glass, replacing the original bay doors that were used for fire engine access. The exterior walls of the front of the building preserved the original brickwork, using a unique method of mortar repointing to ensure the joints between the original bricks were properly repaired. Precision and care were taken in determining the appropriate mortar to use. When compared to other buildings in the neighbourhood, tests revealed that the previous mortar was made from a combination of sand and aggregates from the surrounding land plots. These materials were then collected from excavations during the restoration process and used to repair the brick exterior.

In mild weather, a new piazza provides an ideal collaborative and independent outdoor workspace, universally accessible via a long, cobble-covered ramp from the sidewalk (Figure 1). The multipaned windows used on the surrounding exterior walls are consistent with the period of the original buildings and framed in Douglas Fir. This type of wood was found in the fire hall during restoration and has been used throughout the new library space. The piazza is laid out with pavers made from reclaimed granite found behind the stable. It was later discovered by library staff that the cobbles were salvaged from the original entrance of the Ambassador Bridge in the 1920s. The bay windows give the illusion of the library spilling out into the piazza, bringing the inside and outside together, allowing the piazza to be a part of the library and its programming. The “outward urban expression,” as Grossi describes it, allows passers-by to interact with the library even before entering the interior space.

The interior of the building demonstrates the designer's attention to detail and ability to connect to the neighbourhood. The design fused the two buildings with a modern addition that speaks to the current period, representing a space

where new memories and connections can be made. The three different sections of the library contribute to the overall diversity of space that is evident throughout the building. As a small community library, the John Muir Branch was carefully designed with clear sight lines to allow the staff to monitor the entire space easily. From the early stages of planning, it was evident that part of the second floor would need to be removed for security purposes. This was achieved by placing an atrium in the centre of the building, surrounded by a handmade metal railing on the second floor. A moveable, custom-designed desk for library staff was placed in the main area of the library, allowing for easy access to reference and circulation services (Figure 2; Figure 8). The result was an open and spacious feeling to both floors.

On entering the branch, visitors are met with architectural and design details reminiscent of the 1920s. The ceiling features reproduced tin tiles based on the original tiles found in the fire hall. On sunny days, the building is illuminated by natural light from the windows and skylight. The salt-and-pepper concrete floors serve both aesthetic and acoustic purposes, enabling the movement of sound through certain areas of the library space. As a music composer, Grossi designed the library to have different acoustics to provide a diversity of space for user experience. The front section of the library is ideal for independent reading and a quieter library experience as the acoustics are more muted. The atrium, where sections of the second floor are visible, can be used as a collaborative or meeting space. Sound travels up to the second floor. The area features fully movable furniture including computer stations lining the wall, tables and chairs with floor outlets, and a custom-made circulation and reference desk on wheels. The elements provide the perfect space for music programmes despite the small footprint.



Fig. 6: Children's area in the contemporary addition. © Jason Grossi, Studio g+G inc.

The contemporary space on the first floor houses the adult, juvenile and children's fiction collections as well as children's nonfiction collections on movable bookshelves (Figure 6). Illuminated with natural and diffused light from the glass-covered eastern wall and skylights, the area has become a favourite space for children's storytime, colouring and board games. Picture books line the area near the window.

A bridge overhead (Figure 5) between the second floor of the fire hall and the stable can be seen from the space, providing a visual link between the two older periods and the present. The connection, both literal and metaphorical, highlights the imaginative approach to the project.



Fig. 7: Second floor and atrium. © Jason Grossi, Studio g+G inc.

The second floor is partly visible through the atrium in the centre of the main space, allowing for visibility while adding a cohesive element between the second and first floor (Figure 7). Accessible by elevator or an enclosed concrete stairwell with underlit railings and natural light, the second floor is a multi-use space with areas for both group meetings and independent study. The eastern wall is lined with bookshelves housing the nonfiction collection, with personal workstations in between each window. Smaller work areas mark changing user needs; individuals working on projects often need only a small space for a personal electronic device. A charred, exposed wooden beam is visible on the second floor, forming a connection between the refurbished space and the 1940s when a fire destroyed much of the second floor which had to be rebuilt. Across the atrium is a teen space which features the young adult fiction and graphic novel collections and includes a collaborative table and smart TV with a PlayStation console. Library staff are pleased to report that the seats in the area are rarely empty.

At the northern end of the second floor, a glass-enclosed room with drop-down screens, a sink and plenty of counter space allows for innovative programming and specialised use. It also provides access to the tower where fire

hoses were hung to dry. Visitors can now climb the stairs to observe the surrounding area of Windsor's west side through the glass-enclosed lookout. The former hayloft of the stable is at the southern end of the library, accessible via a walkway floored with original tongue and groove Douglas Fir boards (Figure 5). The wooden panels were reclaimed from the original hayloft and were left unfinished with paint splatter and imperfections to commemorate their original use. The walkway has a railing on both sides and is suspended by wires, all of which are visible from the fiction section on the first floor. The adapted stable area is designed to depict the 19th century period when the original stable was built and includes a small local history collection housed on heritage shelving.

Reimagining Library Spaces

In September 2019, the new John Muir Branch opened its doors and created outreach opportunities for the neighbourhood's unique user demographics through targeted programming and placemaking. Having a designated building to use as a space that provides both information and social infrastructure contributes to the feeling of community. The open concept gives a sense of warmth and inclusion, providing customers with opportunities to learn, engage in meaningful conversations and discovery, or concentrate on their own individual study. Since opening, traffic has increased, and programmes have been extremely successful. Most recently, library staff reached out to the growing 20-30+ population in the area with a speed friending event. The programme was so successful, it reached capacity.

Public library boards are tasked with the challenge of predicting how library spaces will evolve. For decades, libraries have been a third place for communities, spaces where individuals can gather outside of home and work. With lines between work, home and leisure blurring, public libraries are moving beyond the third place and into new territory as user needs change. Contemporary library spaces, like the John Muir Branch, provide the public with a space to meet personal, professional and social needs. The changing spaces have been inspired by new trends and issues in librarianship as identified by the American Library Association (2019), many of which already play an integral role in operations and planning at Windsor Public Library. Library user profiles and the ways in which people interact with library spaces have changed significantly as North American libraries experience an overall decline in print circulation and a growth of alternative library services.

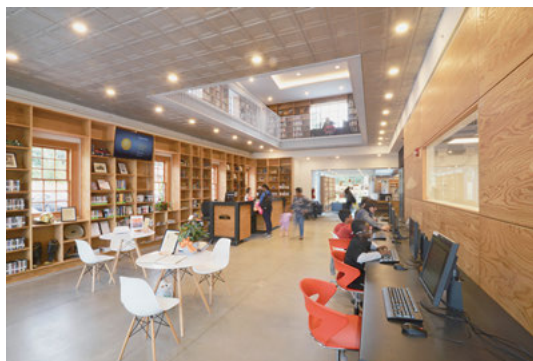


Fig. 8: View of library from the front entrance. © Jason Grossi, Studio g+G inc.

WPL has responded by updating branches and services to reflect changing user profiles, while discovering new ways to measure its success throughout the library system. WPL's Customer Use Index (CUI) combines five indicators of user behaviour into one statistic that focuses on how library spaces are being used. The CUI produces an aggregated number that represents customer interactions based on gate count, circulation, in-house use, public service and website use (Windsor Public Library Board, 2019b). The move to understand how users interact with library spaces is a valuable planning tool for future developments. The changing nature of library use and the absence of a typical physical library user present opportunities for modern library design.

One of the most innovative design elements of the John Muir Branch is the previously described diversity of space proclaimed by Grossi. Visitors can choose how they use and interact with the space. The varying acoustics allow for differing uses from quiet, independent study to collaboration, networking and concerts. The new space is sustainable and maintains a flexible approach to library services based on lessons learned and a better understanding of future needs. The diversity of space also provides co-working opportunities. With more students and young professionals choosing shared living spaces over independent living, and the growing popularity of collaborative workspaces, the diverse library space offers multiple options for gathering. Groups can meet in the main space and move tables together to suit networking needs (Figure 8). For more private meetings, groups can book small rooms on the second floor. Co-working in a public library provides individuals and groups with an affordable and accessible collaborative space. The John Muir Branch was adaptively redesigned as a contemporary library space but holds great potential for future uses. With fully moveable shelving and furniture, fixtures in the building can change to reflect the needs of the community.

As the City of Windsor continues to diversify, its residents, both permanent and temporary, seek spaces to gather. The support of the Mayor and City Council ensured the John Muir project succeeded. It also demonstrated how Canadian library spaces are adapting to the unique and ever-changing needs of the communities they serve. It will be interesting to witness how the John Muir Branch and other branches in the WPL system respond (Windsor Public Library Board 2019a). The innovative design and diversity of space in the John Muir Branch create a sense of place in the neighbourhood while combatting potential negative consequences of revitalisation such as gentrification and displacement. A library space that offers inclusive and accessible programming and bridges the gaps between demographic groups can create a unique community culture and a renewed sense of neighbourhood.

Conclusion

The WPLB took a neglected building and created a new, diverse public space, demonstrating how public libraries can adapt for future generations. The unique situation in Sandwich facilitated the cooperation between the City of Windsor and the WPLB, which played a crucial role in the success of the adaptive reuse project. The project team learned valuable lessons during the process. Adaptive reuse projects are dependent on the support of passionate and committed library boards. In the case of the John Muir Branch, reaching out to interested politicians and decision makers during the early stages was essential. The project was expensive; the project team, however, understood that adaptive reuse can sometimes incur extra cost. Through open communication with board members and the community, the team sustained interest and confidence in the project.

On an average day, people visit the branch for various reasons including checking out and renewing library materials, using workspaces to complete projects, interacting with other library users in the common areas and attending storytime and other programmes. Visitors have quickly utilised the space for their unique needs. The positive customer response demonstrates the success of how the John Muir Branch reimagined the use of public spaces through neighbourhood revitalisation, placemaking and supporting the needs of the community. The efforts made throughout the project resulted in an innovative and diverse facility that presents considerable possibilities for the future. The diversity and flexibility of the space will foster resilience as library services adapt to changing information needs in the 21st century.

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