

# Canadian Innovator in Modern Architectural Stained Glass: **MARCELLE FERRON**

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Architectural stained glass has a long European tradition that has undergone numerous aesthetic transformations. In the post-World War Two era, certain critical developments resulted in a new modern stained glass aesthetic that had an international reach. In Canada a revolution in post-WWII architectural stained glass occurred as a result of the technical innovations of artists and their interdisciplinary engagement with art and craft. In particular, the French-Canadian, Montreal-based artist Marcelle Ferron (1924–2001) made radical innovations that revolutionized stained glass for modern architecture. Motivated by her conviction in the social role of art and the transformative power of coloured light, Ferron broke the traditional barriers of stained glass design and production to introduce a new aesthetic that ruptured the essentially ecclesiastical tradition of stained glass. As an emerging abstract painter and member of *Les Automatistes* in the 1940s, Ferron was part of an avant-garde art movement in Montreal that also aggressively broke with the traditional hold of the Catholic Church to participate in the revolutionization of painting in Canada. From the 1960s to the 1990s, Ferron boldly integrated monumental industrial stained glass with secular public architecture to bring luminous colour to interior spaces, making significant contributions to the Canadian built environment.

## The Post-WWII Architectural Stained Glass Movement

The post-WWII reconstruction in Europe led to the growth and flourishing of a modern stained glass idiom for public architecture. This international movement began in France and Germany where massive war damage to cathedrals and churches required the replacement of stained glass windows. During the 1950s and 1960s in Germany, highly innovative projects for both churches and secular spaces established German artists as the leaders of modernist architectural stained glass. Increased secular patronage of stained glass

allowed artists to explore beyond traditional ecclesiastical figurative imagery and develop a new abstract, non-figurative idiom for the innovative architecture of the time. Georg Meistermann's (1911–1990) five-storey window, *Colour Tones of Music* (1952), for the West German Radio Station in Cologne, exemplifies the new abstract monumental style for a secular space.

While in Germany the new idiom was both a sacred and secular innovation, in France it was solely a sacred one. The patronage of the Catholic Church in France encouraged abstract stained glass with the conviction that contemporary art should have a key role in the religious sphere. The Church opened the realm of religion to contemporary artists of varied beliefs, commissioning leading French painters to design stained glass for several new and restored churches. Fernand Léger (1881–1955) designed seventeen abstract stained glass windows that wrapped around the nave and choir of the new Church of the Sacred Heart at Audincourt (1950–1952). Tremendous luminosity was achieved in the windows with the use of the new stained glass technique *dalle de verre*. For the new Rosary Chapel in Vence (1948–1951), Henri Matisse (1869–1954) designed abstract windows that employed traditional leading with flat antique glass. The essence of both Léger and Matisse's abstract windows was the luminous colours that transformed the interior church spaces with filtered light.

## Marcelle Ferron

Marcelle Ferron was familiar with the long, rich tradition of European stained glass and the new post-WWII German and French developments. Ferron was French Canadian, born in Louiseville, Quebec, in 1924. After establishing a reputation as an abstract painter in Montreal, Ferron moved to Paris for thirteen years (1953–1966). There she painted, exhibited, and travelled to art galleries, museums, and cathedrals throughout Europe. Visiting Chartres Cathedral forty times, she gained a strong appreciation for the symbiotic relationship of the architecture with the stained glass. The luminosity and transparency of colour permitted by the stained glass medium fascinated Ferron. She had been searching for a new material to adapt her explorations of colour, transparency, and light, and stained glass was best suited to transfer these interests

FACING PAGE:  
Marcelle Ferron, 1995.





Fig. 1: **Les grandes formes qui dansent**, south and west walls, 1968, Champ-de-Mars Metro Station, Montreal.



Fig. 2: **Les grandes formes qui dansent**, west wall and stairwell, 1968, Champ-de-Mars Metro Station, Montreal.

to a public art. In the Paris studio of Michel Blum, an inventor and master glass-maker, Ferron learned and experimented with a contemporary stained glass technique.

### A Commitment to the Social Role of Art

Earlier in her painting career as a member of Les Automatistes in the 1940s, Ferron had been deeply committed to the social role of art. Along with her colleagues, in 1948 she had signed the Refus global, a manifesto that called for a new social order for the cultural life of Quebec society, derived from spontaneity and the free exercise of the imagination. Now as a mid-career artist in the 1960s, she was critical of the elitism of small avant-garde galleries and realized stained glass could provide a means to integrate her art with public architecture.

Ferron's stained glass practice was part of a wider sociopolitical movement that saw the flourishing of public art in Canada. Government and professional organizations were promoting art in the built environment through advocacy and awards of recognition. In 1965, with the desire to give Canadians a sense of quality in their built environment, the Federal Cabinet authorized the allocation of one percent of the cost of new construction of federal buildings for art. The Royal Architectural Institute of Canada launched a major award in 1953, the Allied Arts Medal, which recognized outstanding achievement in the Arts that are allied to architecture. Public art also increased due to the growing concept of the social mission of the artist, which was understood along with the architect's role, within the framework of the modern movement and the relationship between art and architecture.

When Ferron left Paris and permanently returned to Montreal in 1966, the Quiet Revolution was transforming Quebec society. Attitudes about the arts were changing, and they were then seen as a vital element of the social fabric. Ferron had the opportunity to create many secular stained glass commissions on a monumental scale that were financed by the Government of Quebec. She ceased painting for seven years from 1966 to 1973 in order to concentrate solely on stained

glass projects, claiming: "I don't paint pictures anymore for the collector to meditate in front of. I want my art to surround the ordinary man with happiness and colour."

The industrial technology Ferron developed enabled her to incorporate monumental stained glass into modernist public architecture. Rather than a traditional stained glass window, which fills a hole in the wall, her designs stretched from floor to ceiling in the form of a wall itself. Crafting stained glass on such a large scale would have been impossible using traditional materials and processes. Industrial technology enabled her to collaborate with architects to design her walls of glass for the new architecture of reinforced concrete.

### Stained Glass Wall, International Trade Centre, Expo '67, Montreal

Ferron's aesthetic worked best when she collaborated in the initial design phase of a building. The first large-scale wall she completed was a project in 1966 with architect Roger D'Astous (1926–1998) for the Expo-Club at the International Trade Centre for Expo '67 in Montreal. D'Astous had apprenticed with Frank Lloyd Wright, so he was sympathetic to the suitability of stained glass as an architectural element that was beautiful yet functional. His wood-frame structure for Expo-Club supported Ferron's eighteen stained glass panels that alternated with narrow plate-glass windows to form a forty-five-metre long wall along a corridor of the building. Her screen-like designs used coloured glass of low saturation with clear plate-glass, permitting views outside that established a continuity between interior and exterior spaces.

### Stained Glass Walls, Champ-de-Mars Metro Station, Montreal

The concept of a symbiotic relationship of stained glass with its physical setting was essential for Ferron, and she maintained: "My aim has always been modest; I wanted to transform the arranged marriage of art and architecture into a love match." This aesthetic is exemplified in Ferron's





Fig. 3: **Les grandes formes qui dansent**, southwest corner, 1968, Champ-de-Mars Metro Station, Montreal.

1968 public commission, *Les grandes formes qui dansent*, at the Champ-de-Mars Metro Station in Montreal. Conceived by Ferron during the initial design phase of the station, the stained glass was the first artwork in Montreal's new metro system to employ an abstract design.

The project was highly contested by officials in its initial design phase due to its non-representational composition, but on its completion was well received by the public.

*Les grandes formes qui dansent* constitutes three adjacent exterior glass walls to form a continuous frieze of colourful ellipses, arcs, and ribbon-like bands (fig. 1). The placement and orientation of the curvilinear shapes imply a lateral flowing motion where the shapes seem to stretch, bounce, and rock and roll rhythmically along the glass wall. It is composed of transparent and opaque coloured glass juxtaposed with clear plate-glass to create a screen-like effect that allows the shapes and textures of the city to be seen. The design enlivens the dull concrete structure by creating a bright, colourful, textured space for the urban commuter, especially in Montreal's long winter months.

The over seven-metre height of the three adjacent glass walls allows for abundant coloured, filtered light to enter the interior space of both the ground and subterranean levels of the station. The adjacent south- and west-facing glass walls rise high above the stairwell of the underground train platform, permitting broad shafts of filtered light to reach the shallow 6.1-metre platform and flood it with colour (fig. 2). Even the train interiors fill with colour as they move through the station. The antiseptic and lifeless concrete structure is also enriched by the stained glass at night, when the three walls are illuminated from the inside by artificial light and appear from the exterior as a light box, a beacon of coloured light in the darkness.

The structural concrete pillars that bear the load of the roof enabled Ferron to innovate her glass design as a continuous frieze that literally wraps around the three sides of the building. Where the glass walls meet, the shapes bend and continue into



Fig. 4: First-storey hall window, 1979, Granby Courthouse, Granby, Quebec.

the adjacent wall, as exemplified in the massive grey arc that straddles the corner of the south and west walls (fig. 3). Thus the colourful abstract frieze encircles the inhabitant, creating a dynamic kinetic environment that alters spatial perception as the rectilinear walls seem to dissolve amidst the floating luminous shapes.

#### **Stained Glass Walls, Granby Courthouse, Granby, Quebec**

The symbiotic relationship of Ferron's stained glass with architecture is further attested in her later 1979 public commission for the courthouse in Granby, one of three courthouse commissions she completed in the province of Quebec. The other two are located in the cities of Val d'Or (1976) and Amos (1975). Invited by the architect to make stained glass for each floor of the three-storey Granby building, Ferron designed dynamic and colourful windows to counter the potentially depressing courthouse atmosphere. Each design is oriented as a frieze that moves laterally in a kinetic arrangement along the south-facing glass wall and extends the full twenty-metre length of the building (fig. 4).

Although the Granby designs have a screen-like quality similar to *Les grandes formes qui dansent*, the predominance of transparent, coloured glass and minimal use of clear plate-glass produces a very different mood and effect. The result is a composition that floods the spaces with highly saturated coloured light in predominantly warm hues, creating a cheerful mood. The brown floor tiles of the interior reflect this warm filtered light off their dark polished surfaces, producing luminous shapes that stretch the entire width of the hallways when the sun is low on the horizon. With little clear plate-glass used in the design, the shapes and textures of the city outside are altered by transparent colour.

#### **Stained Glass Skylight, Vendôme Metro Station, Montreal**

The 1981 stained glass skylight of Vendôme Metro Station in Montreal was also conceived by Ferron during the initial





Fig. 5: Skylight, 1981, Vendôme Metro Station, Montreal.

design phase of the station. Vendôme is the deepest station in the metro system, so the train platform is very dark. The east-facing eleven-metre long skylight inclines at a forty-five-degree angle to maximize the sunlight able to pass through the window (fig. 5). Ferron manages this natural light in the deep space by excluding clear plate glass and using only coloured glass in the design of her skylight, barring any blinding light from entering the space. The skylight can be seen from the subterranean train platform as well as from the main floor entrance, suffusing the spaces with its powerful colour.

### Practice

Ferron approached architectural stained glass as an artist/designer. She collaborated with the industrial company Superseal Corporation in Saint-Hyacinthe, south of Montreal, which enabled her to produce stained glass projects that she designed herself but were fabricated and installed by the factory technicians under her close supervision. This practice entailed a separation between the designing and production processes. However, Ferron maintained control over production by establishing her studio within the Superseal factory. In this way she could be physically present to select the various hues and tones of glass for her designs and oversee the actual fabrication of the windows, making alterations as she saw fit. Each of her public and private commissions was executed with Superseal in this manner and the collaborative venture was physically inscribed on the signature panel of each project. Stamped with glass paint, the signature included Ferron's name and the Superseal logo, indicating Ferron as the artist and Superseal as the fabricator.

### Materials and Technology

Handblown antique coloured glass was the primary material Ferron used in her windows. Her choice was significant, as the material has a depth of intensity and colour that runs through the thickness of the glass due to the metallic oxides used in its formation. The inequalities of tiny bubbles and striations that result from the handblown process of forming antique glass contribute to the action of light in the glass. These attributes

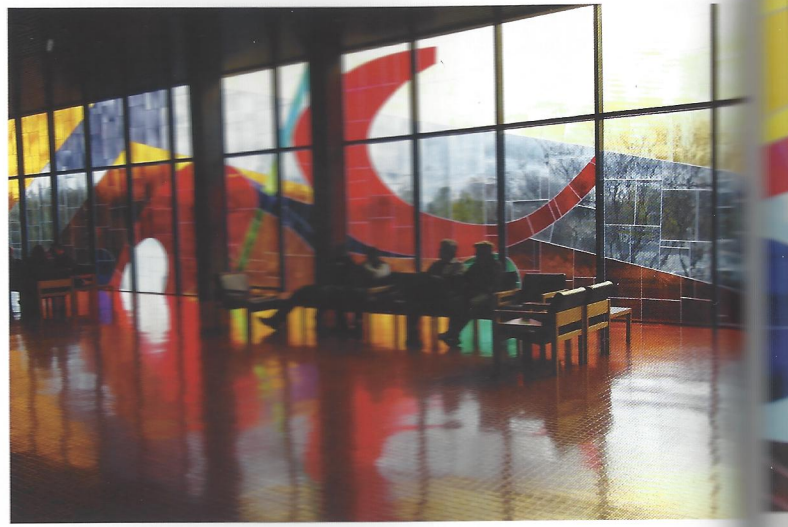


Fig. 6: Third-storey hall window, 1979, Granby Courthouse, Granby, Quebec.

impart the essential element of rich luminous colour to the designs, which Ferron felt was important to communicate in her public windows. She was keenly aware of the emotional power of colour to lift the human spirit and it was an essential tenet of her design aesthetic. She maintained, "If I need colour in my life, I think that millions of others also need it."

Ferron developed her stained glass technology in collaboration with a team of technicians at the Superseal factory under the direction of Aurèle Johnson. The new technology was financed by a research grant she received in 1966 from Quebec's Minister of Cultural Affairs. It was adapted from the patented technique Ferron had bought from her teacher, Michel Blum, which employed acrylic joints, eliminating heavy traditional leading. In Blum's technique, flat antique coloured glass was first cut and butt-joined with acrylic and then sandwiched between two clear plate-glass panels for strength. Ferron believed Blum's acrylic butt-joints were too narrow, causing the antique glass to crack when the glass dilated with changes in temperature. Adapting the technique to withstand the Canadian climate, Ferron and the Superseal technicians replaced the acrylic adhesive with wider, transparent vinyl (PVC) comes in an "H" profile. In addition, they improved the cutting and mounting methods and vacuum-sealed the plate glass. They imported very fragile Saint-Just antique glass from Saint Gobain, France, which was specifically produced for Superseal.

This technique enabled Ferron to create the massive shapes of pure colour that are a hallmark of her designs. The shapes are composed of groupings of coloured antique glass held together by the vinyl comes, while the glass wall becomes a sandwich, with plate-glass panels on either side, cut to fit between the mullions and vacuum-sealed. The illusion of a large area of flat, solid colour is achieved by the use of the transparent PVC comes that allow light to pass through without creating a graphic line. Had she employed traditional leading, the strong, dark lines would have interrupted the appearance of continuous coloured shapes.



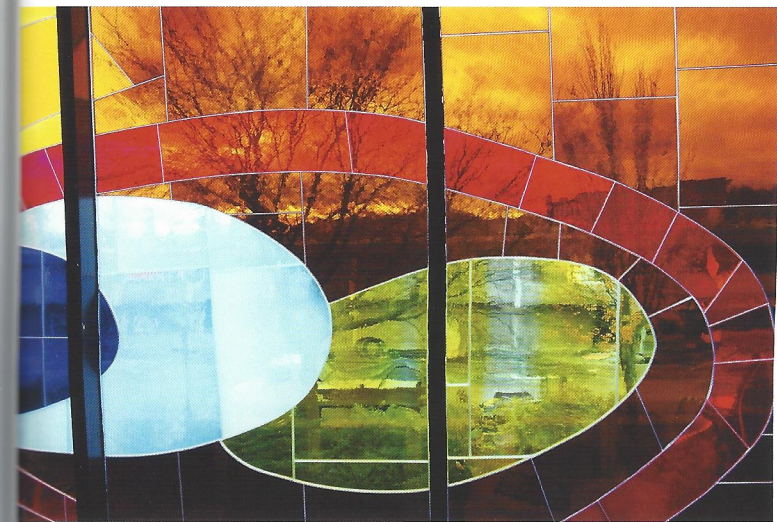


Fig. 7: Second-storey hall window, detail, 1979, Granby Courthouse, Granby, Quebec.

### Aesthetic

A monumental aesthetic in the window compositions results from the relationship of the glass panels to the size of the abstract shapes in the multi-panel designs. Ferron clearly employed effects of scale with great skill. Her large coloured shapes always expand beyond each panel into the next, increasing the perception of monumentality as they stretch across the steel window mullions. The expansiveness and grandeur create the sense of a monumental landscape in many of the abstract designs, both public and private. For example, the massive triangle in the large third-storey window of the Granby Courthouse rises gradually from the ground plane and traverses the width of thirteen panels (fig. 6). It appears as a mountain, echoing the landscape that surrounds Granby in the Eastern Townships of Quebec.

There are many formal links between Ferron's abstract paintings and stained glass in spite of the different processes and materials used. The juxtaposition of transparent and opaque areas in her 1950s gouache paintings can also be seen in many of the stained glass works. In 1956, the Paris critic Herta Wescher noted how Ferron's gouache paintings employed these juxtapositions using superimposed layers of transparent luminosity. However, in the stained glass works there is no layering of colour to produce deep space such as in the gouache paintings. Rather, the designs employ a flat visual concept where opaque and transparent glass are juxtaposed to create a push-and-pull effect. This gives the spectator a view of the world outside while at the same time allowing the eye to rest at the window plane (fig. 7). Ferron played with different saturations of transparent, coloured glass to control this push-pull effect.

There is vigour and passion in Ferron's abstract paintings and stained glass. In the works of the 1960s and 1970s, the large sweeping curvilinear shapes which structure the compositions and extend beyond the glass or canvas frame create dynamic movement. The arc shape is repeatedly used in both media as a motif that embodies vigorous activity, such as *Les grandes*

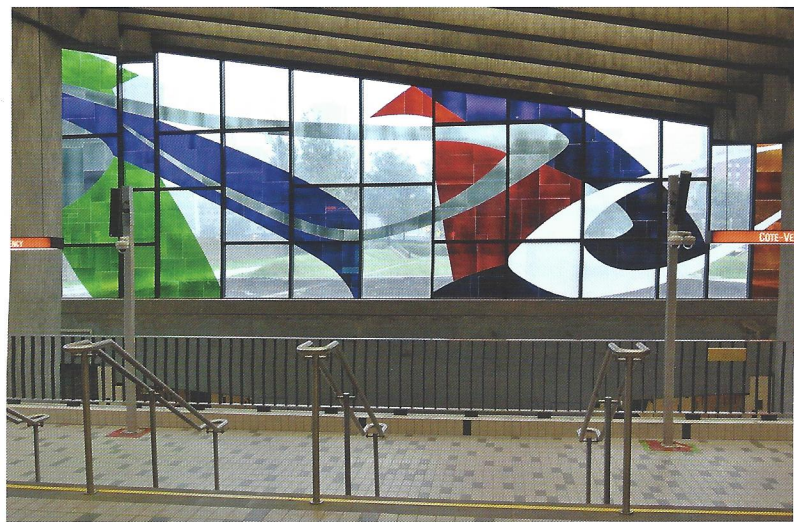


Fig. 8: *Les grandes formes qui dansent*, west wall, 1968, Champ-de-Mars Metro Station, Montreal.

*formes qui dansent* (fig. 8). Above all, the saturated primary colours used in many of the works create contrasts of hue that intensify their dynamism. In spite of the inherent media specificities of stained glass and paint, the vitality of the colour is the essence of the abstract works.

### Conclusion

Ferron's technological innovation with Superseal Corporation and her collaborations with architects shaped a new aesthetic that revolutionized architectural stained glass in the post-WWII era in Canada. Breaking with traditional stained glass methods, Ferron employed handblown antique glass to make monumental industrial stained glass for public architecture. Her screen-like designs connected the interiors to the city, and were symbiotic with the architecture, exemplified by the Champ-de-Mars Metro Station, the Granby Courthouse, and the Vendôme Metro Station. She introduced dynamism and verve to modern buildings with luminous colour, transforming the daily urban experience of every person.

Working as an artist/designer, Ferron brought the revolutionary spirit of *Les Automatistes* to the new era in Quebec, breaking the barriers of traditional stained glass design and production to craft an aesthetic that merged the high art of modernist abstract painting with technical skill and industrial manufacturing. Ferron followed the lead of post-WWII French and German artists who introduced abstract stained glass to public spaces, but she leapt forward with her technical innovation, and in so doing made vital contributions to the Canadian built environment and to the modern international movement in architectural stained glass. ■

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