

Session Track: Special Topics
Session Code: CS07a

Paper: Habitat '67 in '07

Presented by

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Speaker(s) Biography

Employed by Moshe Safdie in Montreal and lived in Habitat in 1969 - 70. Currently Senior Preservation Architect at Superstructures in New York. Projects worked on include Frank Lloyd Wright's Fallingwater, Guggenheim Museum and Unity Temple. He was a professor for eight years at Columbia University School of Architecture, Planning and Historic Preservation, NYU, USC and Campbell Center. Currently I am the Historic Preservation Specialist and Commissioning Agent for GSA for the General Post Office and Courthouse \$55 Million Restoration in Brooklyn New York.

Abstract

Habitat at Forty/APT at Forty
Looking Forward, Looking Back, Looking Forward
By Stephen Gottlieb, AIA
Senior Preservation Architect/Superstructures/New York

Looking Forward

In 1965, Moshe Safdie began turning a student project into one of the wonders of the concrete world. It became "Habitat '67", a pyramid of concrete boxes that was to be a factory-produced economic alternate to in-place construction. In 1969 -70, the author was employed in the office of M. Safdie on Habitat Israel and Habitat Puerto Rico and lived in Habitat. In 2007, the author returned to Habitat to view its condition and offer suggestions for its restoration.

At Habitat, concrete box corners have fallen off, steel has corroded and details have failed. Large areas of concrete walls are exhibiting map cracking and concrete planters surrounding the terraces have failed anchorages. Also, large stains, cracks and carbonate crusts have appeared. A detail, the acrylic terrace enclosures, have fogged and discolored. Poor quality repairs in the past have scarred the concrete in large areas - exhibiting the difficulty of repairing exposed concrete.

Looking Back

The author is well conversed w/ concrete fabrication and restoration. Subsequent to Habitat, the author worked on two concrete systems that grew out of Habitat: Shelley Systems 25 story concrete box apartment erected in Jersey City, New Jersey and several projects for Forest City Dillon including a hotel. Shelley Systems had built over 5,000 units of low-cost modular concrete housing in Puerto Rico. The author was the architect and factory manager for the Jersey City project. The skills honed on these projects [and various un-glamorous [but full of learning experience parking garages] were applied by the author to the assessment and restoration of Frank Lloyd Wright's Fallingwater, Unity Temple, the Solomon R. Guggenheim Museum, I.M. Pei's Silver Towers at NYU developed the expertise to support the observations made at Safdie's Habitat last summer.

Looking Forward

Habitat is not in poor condition but its overall condition is such that judicious restoration is bringing it back to a level of reinforcing protection and concrete skin re-establishment that should guarantee its survival for the next 40 years. This presentation will detail the 40 year deterioration of Habitat, poor quality past repairs, current craft-

based repairs and the up-coming high-tech engineering analysis to direct the preservation and restoration of Habitat '67 for the next 40 years.

Habitat and the modular revolution have not fulfilled their promise but their influence is seen today in the spin-offs that have improved the cost and speed of construction, even if we don't always approve of the results these pioneering efforts have unleashed: factory produced homes and light-weight lower-cost skins such as EIFS. But looking forward, these systems, however unglamorous, are themselves providing us with new challenges and helping us develop new solutions for repair and restoration of monuments and common construction for the next 40 years.⁷

Session Track: Special Topics
Session Code: CS07b

Paper: Bank of Montreal Main Branch—35 years of Changes in Technology and Philosophy

Presented by

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Speaker(s) Biography

Architect with 33 years of professional practice and graduate of McGill University (1975), Fernando Pellicer has worked mostly in the area of historic building conservation. Having started in the field in 1978 by restoring a 1933 hockey arena about to be demolished, he has had the occasion to work on many prominent and classified historic sites such as Saint Patrick's Basilica (1847), Christ Church Cathedral (1857), the head office complex of the Bank of Montreal (1847, 1913 & 1959) and the Parliament Building of the Quebec National Assembly. He is currently working on the conservation of the North West Tower of the East Block Parliament Building Ottawa, the Governor General residence at Rideau Hall, Ottawa, a 1932 art nouveau tower in downtown Halifax as well as several historic churches dating from the 1800's and 1900's. He is a regular lecturer at the University of Montreal master degree course in the conservation of the built environment, Heritage Montreal's course in home renovation/restoration and is a member of the technical committee of the Quebec Masonry Institute and the Quebec Building Envelope Council.

Abstract

This paper aims to present the evolution of technology and philosophy over three separate eras of the same building, the main branch of the Bank of Montreal built in 1847 resembling a classical Roman temple and modified extensively by McKim Mead and White in 1905. The restoration work of 1972 (not by the author) is compared to the work completed in 1987, which was leading edge at the time, to the work completed in 2007 using the what is now considered the best techniques. The 1972 technique of replacing the stone capitals of the columns with cast aluminium coated with a rubberised membrane and sand has, to date, proven to be successful, but the same process when applied to stone decorative elements in poor condition and the copper dome roof had failed by 1986. Work required to restore the capitals of the pilasters, not touched in 1972, used for the first time in Quebec imported specialised stone restoration mortars and also epoxy techniques current at the time. In order to get colour matches for the host stone, samples were sent to Holland, source of the restoration mortar. The results of the pilaster capitals restoration with the specialised mortar have been quite successful require no work 20 years later and aging very well considering the harsh extremes of the Canadian climate of +30c in the summer and -30c in the winter. Despite the success of the restoration mortar, we have now tended to shy away from this approach in favour of real stone inserts (Dutchman repairs) or complete stone replacements. This was the case for the decorative elements which had failed in 1972, restored in 1987 with epoxy and failed again by 2007. Here the approach of carved stone was felt to be the most appropriate to stand the test of time.

The main facade faces south and as such is a haven for pigeons warming themselves in the winter sun among the stone statues of the pediment. The 1972 technique of using grease strips not only did not work, but damaged the stone where applied. The application of anti-pigeon spikes installed in 1987 had limited success as the pigeons still managed to build nest on top of the spikes. Following the third cleaning of the statues and their complete restoration, the only approach which we felt would work is the installation of a complete netting over the entire pediment. This to date has proven successful.

Steps cracks reappeared in 2007 which were repointed in 1987. In order to resolve the weakness in the wall at these locations, the use of specialised grouted stainless steel anchors was introduced. This approach did not exist 20 years earlier, but we are confident it will be successful. Only time will tell.

It is not often that we can revisit one's own work after 20 years, let alone work again on the same building doing similar work and compare the results. This presentation aims to share this wealth of information and experience with the conservation community.

TO BE CONTINUED LATER7

Session Track: Special Topics
Session Code: CS07c

Paper: The Challenges of the Rehabilitation of the Ernest-Cormier Building in Old Montreal into the New Quebec Court of Appeal

Presented by

Eric Millette
Con_text_ure
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Speaker(s) Biography

Eric Millette has a degree in architecture and master degree in heritage conservation from Université de Montréal. He s been working in the heritage field since 12 years now. He gives lectures for Heritage Montréal and Université de Montréal.

His practice covers a large range of projects like the restoration of a hydroelectric power plant, the refection of a 1960 s curtain wall, the restoration of the finishes of churches and the design of an addition for the oldest jail still active in Montreal. Another field has been the integration of existing building in large new complexes for example, Caisse de dépôts et de placements du Québec that integrated the Montreal Herald building and the Cité du commerce électronique with the Guaranteed Pure Milk building.

Throughout his involvement in different projects, he had to raise awareness and convince clients, which are not necessarily well known for their preservation involvement, to keep and maintain their heritage buildings.

He worked last year on the reconstitution of the original slate roof of the oldest building of Montreal, the Séminaire des Prêtres de Saint-Sulpice. He presently studying the possibility to kept the old trinity church in the middle of the complex of the new university hospital, CHUM.

He has been working as a technical adviser for Conseil du patrimoine religieux du Québec, a provincial organization specifically involved with religious buildings. He also starts a project of studying acceptable new materials for restoration with the Commission des biens culturels du Québec.

He now works as a consultant with his firm Con_text_ure on heritage projects, often in collaboration with different architectural firms.

Abstract

The project was lead by the Societé Immobilière du Québec, a branch of the provincial government charged of the managing the buildings owned by the province of Québec. It was seen primarily as a simple reuse of the building designed by Ernest Cormier where the needs of the new user, the Court of Appeal of Quebec, should be suited. The project was progressively modified as a partial restoration and conservation project changing the approach to the original elements which give the character and the value to the building.

The project illustrates both the heritage conservation technologies of the day and a new kind of philosophy of approach for the reuse of heritage building and their conservation.

A pragmatic approach was kept throughout the decision making process. All choices were based on a thorough comprehension of the building. A lot of efforts were involved in trying to correct mistakes of the past without erasing the history of the building.

The general attitude, to keep the intervention as minimal as possible, was well received. The focus was made to clean and to regain the comprehension and the richness of the different materials used without removing their patina and to consolidate them to prevent future damage.

Different sensible types of cleaning method were tested for the various finishes.

A lot of efforts were directed to give back the original atmospheres of the spaces within the limited budget, which was not evaluated to do a restoration.

The project shows also a new kind of attitude in the philosophy of intervention in Quebec. All the new elements were of contemporary design but in harmony with the existing therefore avoiding pastiche and imitation. The goal here was not to modify the perception and the lecture of the original parts of the building. The brutal contrast approach was particularly put aside, judged unsuitable with the new use of the building, a justice court.

Reintroducing the original typology of the building, which was lost over the years by the different uses, was another challenge of the rehabilitation particularly because of the codes aspects and the raise of the security level. Elements like old prisoners stairs were preserved not for their architectural value but for their significance in the organization and the original planning.

The problem of the introducing private bathrooms in the original configuration of each of the judge s offices was largely discussed. The design finally chosen was the concept of the box within the box . This solution, a box lined on the office side with library shelves, provided a way to keep the original geometry and moldings of the rooms, and permitted the introduction of individual bathrooms that were treated as furniture.

An innovative philosophy for the introduction of mechanical elements was developed. The efforts were oriented toward reducing the demolition of the original fabric focusing on a tight coordination to hide the shafts, therefore avoiding giving them an historic treatment. Acoustical problems were also solved with a new approach starting with the diffusion of the sound, avoiding introducing acoustical panels on the heritage fabrics.

The cast bronze elements like lighting torcheres, mural units and monumental doors were carefully restored as one of the first Art Deco manifestation in Montréal. Theses elements illustrate the dichotomy between the architectural styles in vogue at that time in Montreal, the Beaux-Art in that case, and the trend in Europe.

The project won an Orange prize from Sauvons Montreal and was finalist at the Prix d excellence of the Ordre des architectes du Québec 2007, in the heritage conservation and restoration projects category.⁷