



Franz Amrhein, Walter Maria Förderer, Peter Steiger, Avanchet-Parc, Geneva, Switzerland, 1969-1977.
© EPFL-TSAM, Claudio Merlini, 2020.

***Avanchet-Parc* in Geneva: an experimental housing scheme, an exemplary complex**

BY FRANZ GRAF AND GIULIA MARINO

In the teeming context of the 1970s, the *Cité Avanchet-Parc* is an undeniably original achievement, representative of the approach – above all cultural – of a generation of architects who sought to experiment with new urban and architectural forms in response to current practice. The satellite precinct is also a sign of skillful construction, undoubtedly pioneering in the context of the 1970s and which is still today, half a century later, the essence of its relevance to the present. An exemplary experience, the *Cité Avanchet-Parc* today deserves renewed recognition.

“Humanizing architecture”: an experimental development

Completed in 1977, the *Cité Avanchet-Parc* in Geneva, is a housing scheme deeply rooted in the culture of its time. Assisted by Franz Amrhein (1929-2019), the architects Peter Steiger (1928-) and Walter Maria Förderer (1928-2006), both very active in the Swiss Werkbund when it was campaigning for the renewal of housing, became involved in the Geneva project in 1969. The project was deliberately conceived as a reaction to current practice, at a time when it was being called into question. It was a pivotal period in the history of architecture of housing: the end of *Les Trente Glorieuses* [The Glorious Thirty] coincided with the end of the policies of the large-scale housing projects, and this was happening everywhere in Europe. While waiting for “cluster habitat” to emerge as a viable alternative to the satellite-precinct of the 1950s and 1960s designed to an elementary grid layout by juxtaposing tower blocks and linear blocks, experimentation was the rule. Punctuated by pioneering achievements – Émile Aillaud (1902-1988) in France, Lucien Kroll (1927-) in Belgium, or Ralph Erskine (1914-2005) in England – this was a period of prolific research. New and innovative configurations were emerging, with obvious societal implications.¹

The approach adopted by the architects of *Avanchet-Parc* was very clearly of “a break with the past.” The Lignon housing project (George Addor, Jacques Bolliger, Dominique Julliard, and Louis Payot, 1963-1971) served as a model so far, but the architects explicitly diverged from it. It was a question of adapting the industrialized construction techniques which had finally been mastered perfectly to a new way of thinking about housing estates, from which they banished any form of “monotony” that would result from the repetition of the prefabricated components.² They therefore had to explore new strategies. Through a tenacious design process, moreover, driven by the prolific personality of the architect Christian Hunziker (1926-1991),

playing the part of the “devil’s advocate,” the designers of *Avanchet-Parc* delivered a bravura showpiece.

To achieve this, they deployed all the available means in a true *crescendo*: the open asymmetrical design articulated around a central spine of amenities; the volumes varied by shifting, skewing and jutting generated by a skillful “combination” of typologies; the color schemes, which drew on the rules of perception to enable the inhabitants to identify with their housing block and find their bearings on the estate; the architectural landscape, literally sculpted in the ground by the artist Jürg Altherr (1944-2018) and the landscape designer Christian Stern (1935-), which offers a multitude of different outdoor spaces where the various plant species are conceived as landmarks. A broad array of devices was used with the aim of “humanizing the architecture,” in keeping with the vocabulary of the time, in reaction to the criticisms of the “boring” architecture of those “contemporary rabbit cages,” those “termite mounds” which had arisen on the outskirts of cities. A profusion of ideas emerged, which took material form in so many shapes and volumes, colors and textures. Everything was, however, perfectly organized to guarantee at the same time the rationalization of construction work, which meant the control of costs and deadlines, a crucial issue in a context of housing shortage that had persisted since 1945 and by that time seemed endemic in the canton of Geneva.

“Building for the greatest number”: a remarkable operation

The housing development in Vernier-Geneva is indisputably an original achievement, representative of the approach – above all cultural – of a generation of architects that, in the 1970s, sought to experiment with new urban and architectural forms. Suffice it to say that *Avanchet-Parc* is an extraordinary housing estate that has no equal in Switzerland. But *Avanchet-Parc* is also a beautiful story of a fruitful collaboration between trade unions, employers’ associations, and

01 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. Satellite precinct, Vernier. © Gertude Trepper, Centre d'Iconographie, Bibliothèque de Genève.



a private developer, who joined forces to create a complex planned to house 7,000 inhabitants.

When, in 1970, the “Schwarzenbach Initiative” aimed at limiting the number of foreigners in Switzerland was sparking passions, the social partners agreed to send a strong signal by building housing intended for a population with a modest income through the intermediary of combined union and employer cooperatives. At the same time, Ernst Göhner (1900-1971), a powerful developer and general contractor from Zurich, was seeking to extend his activities in Geneva with a new housing complex intended to crown his impressive portfolio of completed works in German-speaking Switzerland. The social partners set themselves a specific objective: to build a housing complex that could set an example, act as a demonstration of social peace considered essential to counter a popular initiative that was harmful on both the political and economic planes. Ernst Göhner, for his part, had the expertise and know-how. Since the late 1950s, he had worked to rapidly make available housing to the middle class with above-average standards but at low prices, thanks to the most advanced industrialized techniques backed by a very competitive financial plan. With the support of the public authorities, this multitude of actors that everything seemed to oppose a priori, then jointly engaged in an operation that was meant to be exemplary: a housing estate of 2,200 home units, partly subsidized, partly for unregulated rental, supplemented with numerous community amenities and pleasant green spaces that the residents could make their own – such as the community’s urban allotments, which were integrated from the outset into the city’s outdoor facilities.

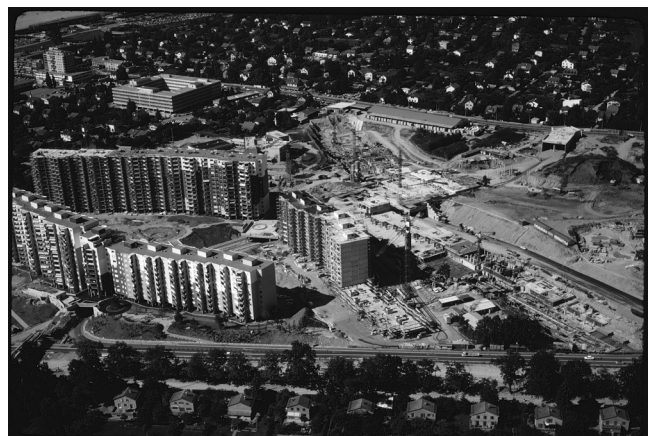
“A housing estate of a new and original design” whose value needs to be enhanced

Avanchet-Parc has been somewhat forgotten in recent years. By mistake or ignorance, the whole development was often overlooked in the series of significant operations that the

canton of Geneva undertook after 1945, including *Meyrin*, *Le Lignon*, *La Gradelle*, among others. Worse, the complex is often stigmatized, being presented – quite wrongly – as the result of the most abject real estate speculation. Nothing could be further from the truth, just as one can easily rebut the critical remarks about the excessive density of the whole or its overgrown character. As for its social representation, this is also somewhat problematic: a certain number of received ideas still weigh on this district whose social mix – part of the operation from the start – has nevertheless contributed to its undeniable success. Spacious and well-designed apartments, the presence of numerous amenities, generous public spaces that benefit from the separation of traffic flows (the roads are placed beneath the public park), its layout, which offers a variety of viewpoints and ensures the buildings do not overlook each other: these are all reasons that have helped make *Les Avanchets* a neighborhood where life is good, according to its inhabitants.

The city has certainly passed through some difficult times – such as the effects of the emergency federal decrees on property law of 1989, which caused a sudden change in the level of the population by an unprecedented concentration of disadvantaged social categories. Over the years, however, *Avanchet-Parc* has regained the vitality of its beginnings, a vitality attested to by a community life of extraordinary richness, supported by a committed public policy which, at the local level, has borne fruit in terms of social cohesion. Despite a sometimes critical external outlook on the whole, the inhabitants have been able to appropriate *Avanchet-Parc* as a pleasant place to live, enhancing the value of its many assets.

When it was built, between 1969 and 1977, the last of the Geneva housing estates was asked to conform to certain paradigms of the spatial planning policy of the WWII period, at a time when they were beginning to be called into question. Paradoxically, the project by Peter Steiger, Walter Maria Förderer and Franz Amrhein represents the culmination of the established practice of the *grands ensembles* [large-scale high-rise housing projects] while also being ahead of its time. It made the transition between the design of the satellite cities of the 1950s and 1960s (in

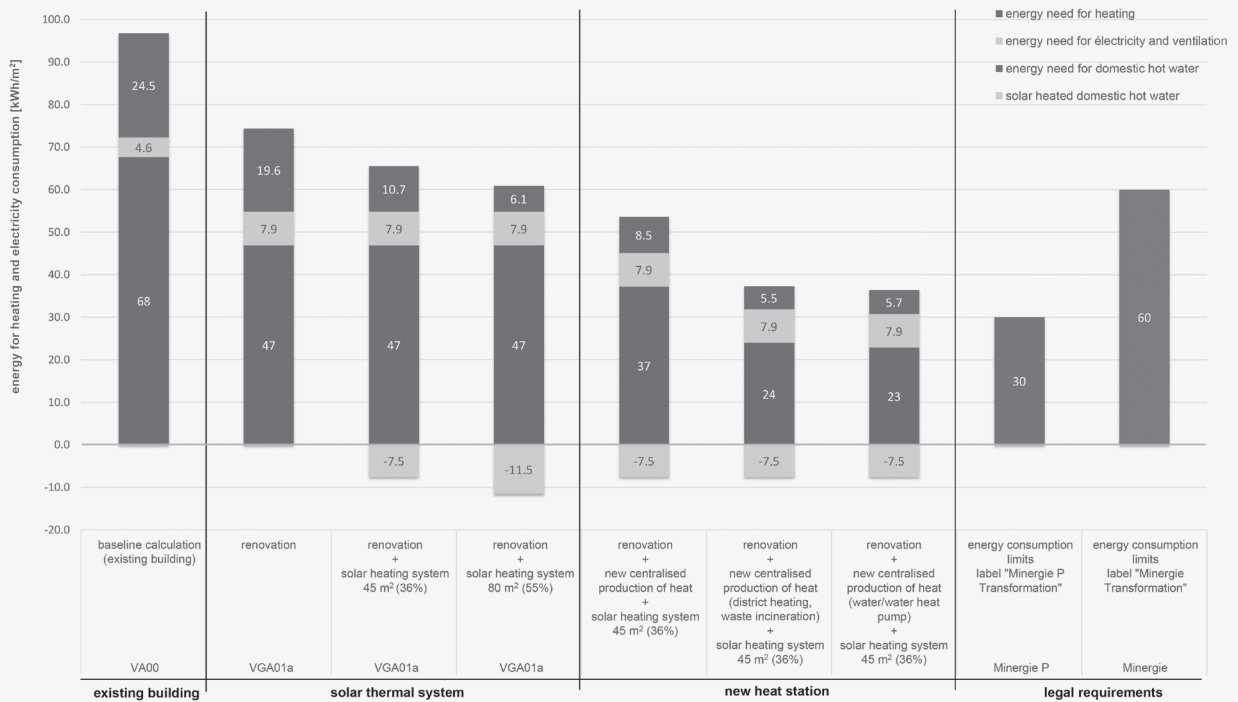


02 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. Construction site of *Avanchet-Parc*, 1974. © Archives d'architecture, Université de Genève, Zschokke Archives.

03 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, 1969-1977. *Avanchet-Parc* in 1977. © Jacques Buards' archives.



04 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. © Claudio Merlini, 2020, EPFL-TSAM.



05 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. *Avanchet-Parc* is particularly efficient in terms of energy use, with punctual interventions, carried out from the inside and respectful of materiality, the city easily falls within the legal limits of the law on energy. © EPFL-TSAM, *Guidelines for Avanchet-Parcs' safeguarding*, 2013.

constructional terms, as well as others) and a whole new way of thinking about housing that would in turn be upset by the reaction to the oil price shocks of the 1970s, which led to a far-reaching changes in the techniques and architectures produced.

The complex therefore fully shares in the *corpus* of remarkable buildings from a period of architectural history that today deserves new consideration, which is already being undertaken. Thus, after the wave of recognition, which is highly salutary, experienced by the post-war housing estates, it is now a question of broadening the established periodization, by taking into account a certainly more recent heritage, but one for which we now have sufficient perspective to assess its heritage value.

The heritage of the architecture of the 1970s is recent, even very recent. The tools – both scientific and cultural – for identifying the qualities of the architecture of this period, even to place these objects in a given context, in a crucial phase of contemporary history, are being put in place. *Avanchet-Parc*, which perfectly meets these criteria, deserves to be viewed in the necessary perspective. Multicultural and the bearer of a great social and generational mix, *Les Avanchets* is an exemplary experience. At the present, at a time when the planning challenges of the canton of Geneva are giving rise to a passionate and fascinating public debate, we should look with renewed interest at the *Avanchet-Parc* housing estate, bring out its qualities and learn from it.

We should recall the process of placing the *Lignon* housing estate under protection, which in 2008-2009 raised numerous questions.³ The dialog, not always serene, was however constructive: the exceptional overall value embodied by the complex designed by George Addor (1920-1982), since protected by a site plan on the cantonal level, was finally recognized. Today, ten years later, it would be opportune to extend this cultural recognition to *Avanchet-Parc*, a unique record of a later phase in the history of the canton and of European architecture. The time has come and *Les Avanchets* deserves it by the representativeness of the approach and the coherence of the result, all well as by its undoubtedly remarkable character.

Technical innovation and regular maintenance: a wager won

Investment in the construction of *Avanchet-Parc* was substantial, with, it appears, a relatively small profit for Göhner S.A., which acted both as co-developer and general contractor. The use of the most innovative construction techniques – and not necessarily the cheapest – was considered a guarantee of success. From the design of the public spaces to the layout of the apartments and their finishes, everything was done to ensure the highest quality. Excellence was sought and every means was adopted to secure this wager.

This far-sighted strategy is confirmed today, fifty years later, by the excellent state of preservation of *Avanchet-Parc*, an otherwise perfectly maintained housing complex. Despite some unfortunate alterations – the renovation of the ground floors and the almost systematic change of the beautiful original wooden double windows with more

06 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. *Avanchet-Parc* in 2020. © Claudio Merlini, 2020, EPFL-TSAM.



banal PVC (polyvinyl chloride) elements – the whole has indeed benefited from regular maintenance, both in the buildings and the outdoor spaces, profiting from the outset by the services of a central management commissioned by the cooperative of home-owners, which acts in concert with the municipal services. The model is very similar to the one implemented a few years earlier at *Lignon* – a pilot operation which saw very strong involvement by the same union cooperatives. As in *Lignon*, the benefits of this both pragmatic and forward-looking approach deserve to be noted: it is a rare and precious achievement in the most often neglected European housing estates, which reinforces their image as socially troubled neighborhoods and with the least architectural qualities, two dimensions absent from *Avanchet-Parc*.

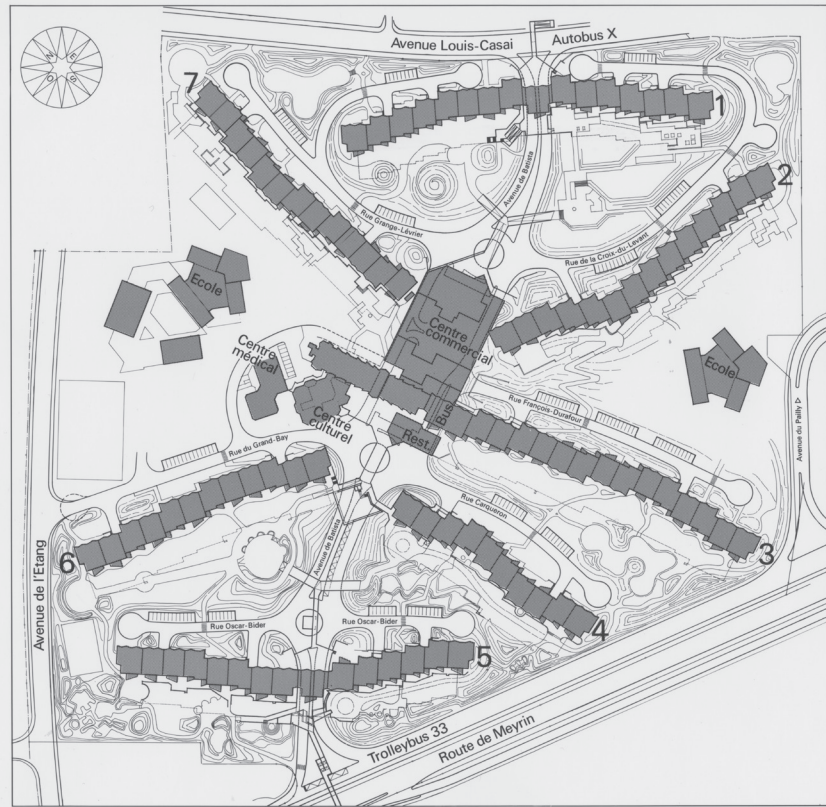
In this respect, one last point should be mentioned: the energy performance of the whole. This is due to the ventilated facades, thanks to which the buildings are insulated from the outside and so achieve a thermal and acoustic performance well above the average of the time. Indeed, if the reinforced concrete structure built by the IGECO S.A. heavy prefabrication process was fully perfected at the time – suitably adapted to the height of the buildings, which can rise to thirteen stories – the envelopes of the buildings undoubtedly represent one of the main advances of *Avanchet-Parc* in constructional terms.

The estate includes a ventilated facade, a continuous skin placed in front of the supporting structure in prefabricated reinforced concrete, which excludes any thermal bridge. The construction technique is that of the “Ickler Norm 100 system,” a sub-construction of aluminum T-shaped and angled profiles, fixed to the supporting structure by means of cast aluminum plates using stainless steel screws. After insulation, the facade was clad with Pelichrome panels, a flagship product of Eternit included in its catalog in 1964 with an impressive palette of colors. These were fitted with standardized window units produced by the Ego company, part of the Göhner group since the 1940s. These wooden “box windows” are particularly sophisticated from the point of view of their airtightness. Fitted with two single

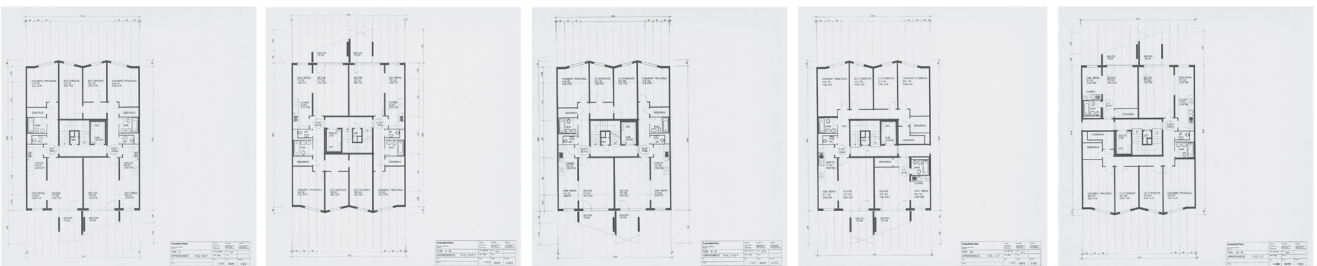
07 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. © Claudio Merlini, 2020, EPFL-TSAM.



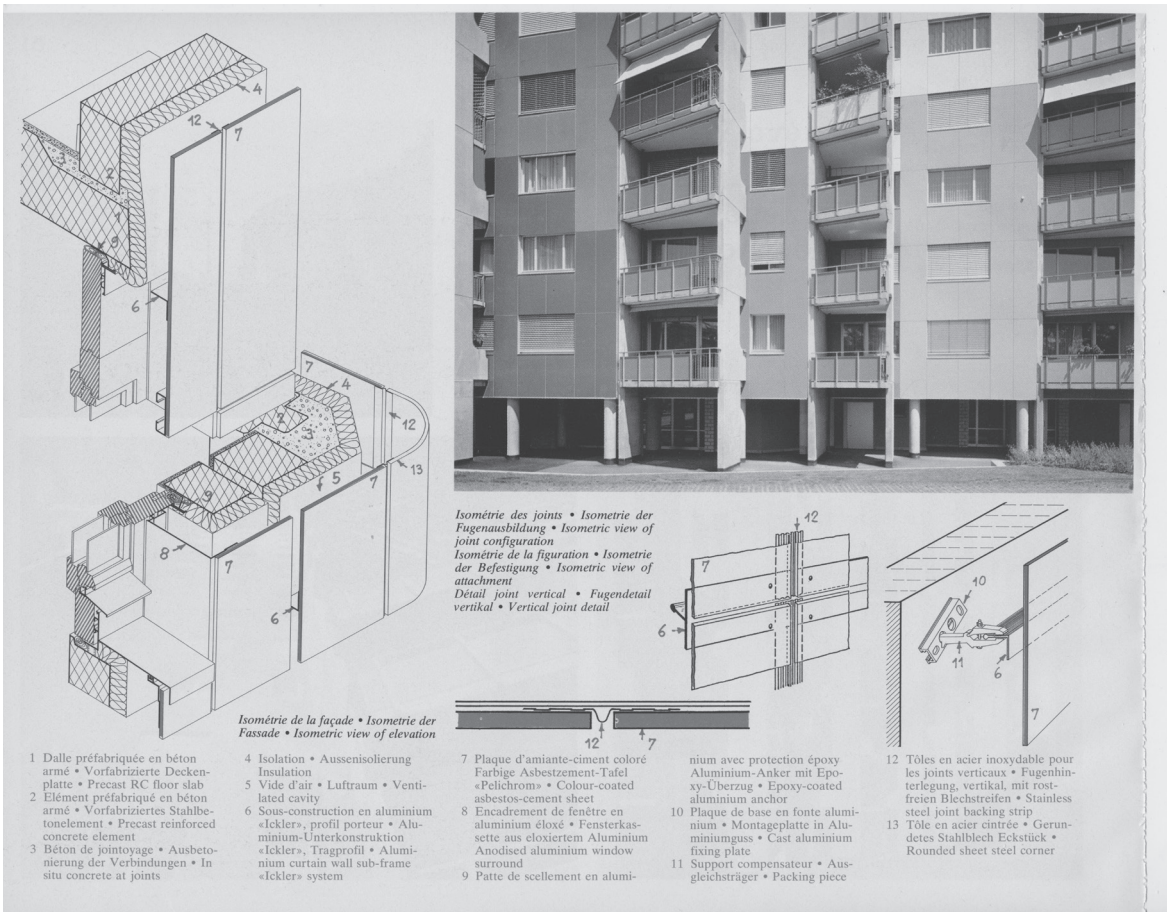
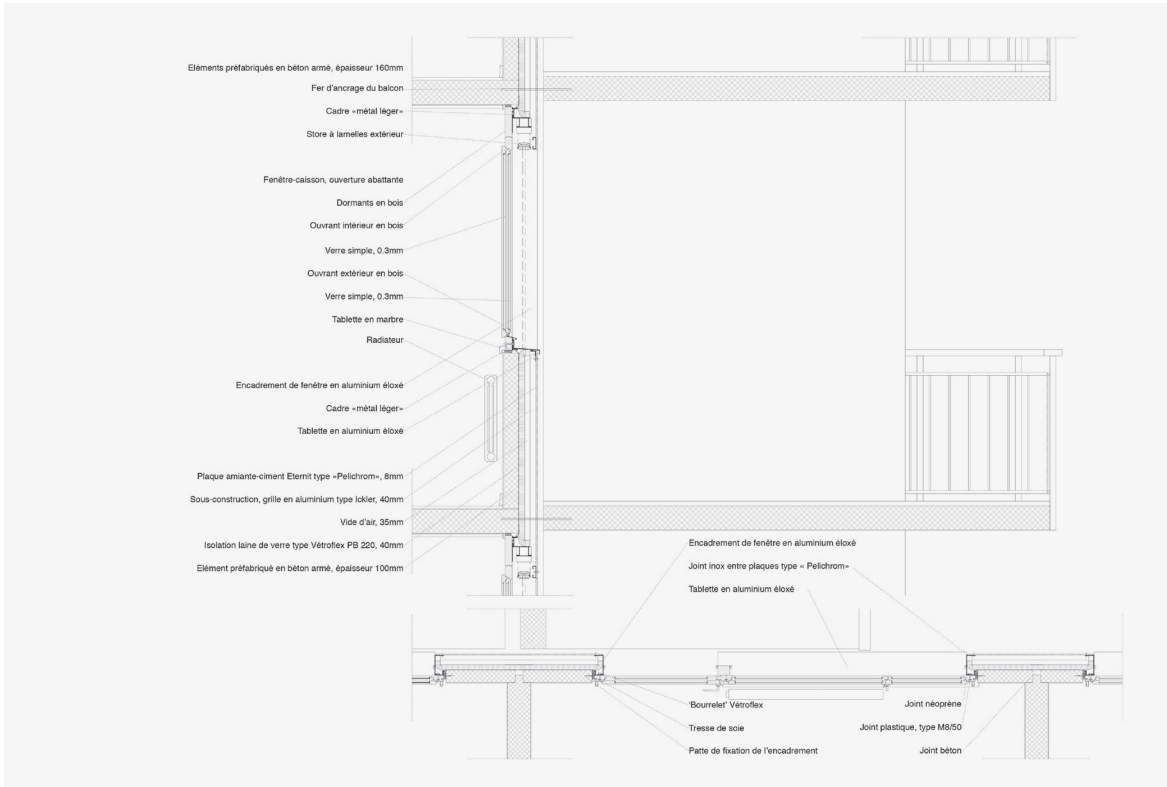
08 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. © Claudio Merlini, 2020, EPFL-TSAM.



09 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. General plan of the Cité Avanchet-Parc. © Jürg Branschis archives.



10 Franz Amrhein, Walter Maria Förderer, Peter Steiger, *Avanchet-Parc*, Geneva, Switzerland, 1969-1977. Floor plans of different typologies, 1972. © Peter Steigers archives.



coupled glass panes, they also ensure excellent thermal and sound performance – a crucial factor due to the proximity of the airport.

A primarily pragmatic option, the ventilated envelope was a pioneering choice, ahead of its time. On the one hand, this constructional principle offers very great freedom in the plastic expression of the envelopes compared to the traditional concrete painted or coated at the bottom of the formwork, and the architects took advantage of this freedom in a masterly way. On the other hand, from a constructional point of view, the design of these “durable, adjustable and economical” envelopes follows the logic of the industrialization of components and constructional elements, the real unifying thread in the *Avanchet-Parc* project and the Göhner company’s cutting-edge product.

A pioneering city: heritage and energy

The material design of the envelopes of the buildings at *Avanchet-Parc*, therefore, represents a pioneering approach, heralding the paradigm shift that would take place in construction following the oil shocks of 1973 and 1979 through the generalization of peripheral insulation. Economical operation and lower maintenance costs were featured as a major asset, which is indeed the case. Recent research conducted by the Laboratory of Techniques and Preservation of Modern Architecture (TSAM) of the Federal Polytechnic in Lausanne (EPFL)⁴ have shown, with supporting calculations, that with its annual consumption, *Avanchet-Parc* is particularly efficient in terms of energy use. Through the design of ventilated envelopes with external insulation and balconies with thermal breaks, as well as district heating that was particularly effective at the time and has since been adapted through incentivization programs at the cantonal level, the measures taken by architects to contain operating costs have proved to be beneficial.

On the basis of this observation, resulting from a careful knowledge of the constructional and material aspects of the estate, guidelines have been laid down for the preservation of *Avanchet-Parc*. Conducted with a multi-criteria evaluation process, which takes into account several variant forms of intervention, the studies have revealed the very great potential of the whole as regards its future renovation. The results are encouraging. By making local improvements on the inside, hence respectful of the exceptional architectural qualities of *Avanchet-Parc*, which needs imperatively to be preserved, it can easily meet the most ambitious standards in terms of energy saving. With a reduction in heating needs estimated at 51.8%, coupled with the installation of solar thermal collectors that would cover domestic hot water needs to the order of 36%, the *Avanchet-Parc* estate could even achieve certifications of excellence, while retaining its intrinsic qualities. This is a sign of skillful construction,

undoubtedly pioneering in the context of the 1970s and which is still today, half a century later, the essence of its relevance to the present.

Notes

- 1 Franz Graf, Giulia Marino, *Avanchet-Parc: "Cit  de conception nouvelle et originale"*, Gollion, Infolio, 2020.
- 2 Giulia Marino, "Variations on the theme of Plattenbau. Heavy prefabrication and total industrialization in the experience of the G hner housing estates in Switzerland (1966-1979)", *History of Engineering – Proceedings of the 3rd International Conference*, Naples, Cuzzolin, 2020, 869-880.
- 3 Franz Graf, Giulia Marino, *La cit  du Lignon 1963-1971.  tude architecturale et strat gies d'intervention*, Gollion, Infolio, 2012.
- 4 Franz Graf, Giulia Marino, *Patrimoine moderne,  conomie,  nergie. Strat gies d'intervention pour les grands ensembles, 1945-1975*, research funded by the Stiftung zur F rderung der Denkmalpflege, Zurich, EPFL-ENAC-TSAM, Lausanne, 2013-2015. A summary was published in this journal: Giulia Marino, Franz Graf, "Housing Reloaded. Collective Housing in Europe, 1945-2015", *docomomo Journal* 54 – "Housing Reloaded", Lisboa, *docomomo International*, 2016, 4-9.

References

- Chantiers*, special No. "Avanchet-Parc Gen ve", Geneve, Chantiers Magazine, June 1975.
- FURTER, Fabian, SCHOECK-RITSCHARD, Patrick, *G bner Wohnen. Wachstumseuphorie und Plattenbau*, Baden, Hier+Jetzt, 2013.
- GRAF, Franz, MARINO, Giulia, "Modern and Green: Heritage, Energy, Economy", *docomomo Journal* 44 – "Modern and Sustainable", Barcelona, *docomomo International*, 2011, 32-39.
- GRAF, Franz, MARINO, Giulia, *La cit  du Lignon 1963-1971.  tude architecturale et strat gies d'intervention*, Gollion, Infolio, 2012.
- GRAF, Franz, MARINO, Giulia, *Avanchet-Parc: "Cit  de conception nouvelle et originale"*, Gollion, Infolio, 2020.
- MARINO, Giulia, GRAF, Franz, "Housing Reloaded. Collective Housing in Europe, 1945-2015", *docomomo Journal* 54 – "Housing Reloaded", Lisboa, *docomomo International*, 2016, 4-9.
- MARINO, Giulia, GRAF, Franz, "Une transfiguration silencieuse. Transition  nerg tique et patrimoine de la grande  chelle", *Trac s*, 142/5-6, March 2016, 12-19.
- MARINO, Giulia, "Variations on the theme of Plattenbau. Heavy prefabrication and total industrialization in the experience of the G hner housing estates in Switzerland (1966-1979)", in Salvatore D'Agostino, Francesca Romana d'Ambrosio Alfana (ed.), *History of Engineering – Proceedings of the 3rd International Conference*, Naples, Cuzzolin, 2020, 869-880.

Franz Graf

Graduate in architecture from the EPFL (Switzerland), Full Professor of Technology at the *Accademia di Architettura di Mendrisio* and Associate Professor of Architectural Theory and Design at the EPFL. His research explores modern and contemporary construction systems and he has published in major reference works. Since 2010 he has been President of *docomomo* Switzerland.

Giulia Marino

Professor at the *Universit  Catholique de Louvain* (UCLouvain), Faculty of Architecture, Architectural Engineering and Urban Planning (LOCI, Brussels) and researcher at the Laboratory of TSAM at the EPFL. She is specialized in conservation of modern and contemporary heritage, and in history of 20th century construction techniques and building services. She has been Vice-President of *docomomo* Switzerland since 2015.