Yesterday's Elegance on Today's Budget

— Craig A. Shutt

Chicago architect Lucien Lagrange uses precast concrete panels to revive early-twentieth-century quality and details on residential projects

Architect Lucien Lagrange has become well known for his attention to detail and respect for the elegance of past architecture. He is well situated in Chicago, Ill., which teems with notable buildings from the early 1900s that feature stone and creative details. But today's budgets often don't accommodate owners' desires to take advantage of those features. Fortunately, designers at Lucien Lagrange Architects Ltd. can often exploit the benefits offered by architectural precast concrete panels to meet those needs aesthetically and economically.

– *Lucien Lagrange, Principal, Lucien Lagrange Architects*

'Precast is helping us a lot on projects because we can do so much detailing on the building at a cost we can afford. We can mold and shape it any way we want to create an elegant look. We can't do these projects in stone any more.'

The architectural firm has found itself in the news frequently, as its approach to residential projects, especially hotels and condominiums, has gained admirers. Since 2004, the firm has designed 1273 residential units in Chicago. These include the 318-residence Lincoln Park 2520 condominium building, the Ritz-Carlton Residences on the Magnificent Mile (also known as Michigan Avenue), The Catalyst condominium high-rise in the West Loop, the Ten East Delaware condominium tower area, and the luxurious Elysian Hotel & Private Residences in the Gold Coast area north of downtown.

"We try to bring to our projects a feeling of a 'prewar design,' as *The New York Times* called it," explains Lagrange. Between the two world wars, a number of striking buildings were constructed in New York and Chicago. "We want to go back to the elegance of those days in our designs and provide a high level of quality to our architecture. Especially along Lake Shore Drive, there is a certain elegance to those buildings that we lost with the modern movement. We want to restore that period of classical design and provide a more ornate look." The style is less art deco than it is simply classical, he adds.

International Background

Lagrange brings to his work the insight he developed in his native France, university days in Montreal, and early career at Skidmore, Owings & Merrill in Chicago. "Certainly, my international background affects my perception of design, but it's also affected by the Chicago skyline itself. When you look at the buildings that are already there, they are beautiful—not only the apartment buildings, but the office buildings too. They are very ornate, with many details. We want to bring back that traditional look of a base, shaft, and top. We're not inventing it."

A good example of the approach can be seen in the Lincoln Park 2520 project. Located amid some of the city's most prominent addresses, the high-rise, which is under construction, offers impressive views of the park, lake, and downtown cityscape. The design creates the illusion of three towers: a 41-story central core featuring a zinc-clad mansard roof, and two flanking "shoulders" of 21 and 30 stories. Punctuating the street level will be a dramatic, two-story entrance supported by classical columns. The entry, to be constructed of granite and limestone, will unite the towers.

Twelve townhomes along the bordering park, along with a 639-car parking structure, are included. The project, comprising 1.12 million ft^2, includes a spa and fitness center, a dance studio, an indoor pool, an outdoor terrace overlooking an acre of private parkland, and valet parking for residents and guests.

'We try to bring to our projects a feeling of a prewar design.'

The project features architectural precast concrete panels above the entry level on all three towers. The precaster for the project had not yet been selected at press time. "Precast is helping us a lot on projects like this one, because we can do so much detailing on the building at a cost we can afford," he says.

"We can mold and shape it any way we want to create an elegant look. We can't do these projects in stone any more. Sometimes on a low-rise, eight-story building, the owner can afford it for the entire facade, but when you have 20-some-story towers, it's impossible. So we use precast concrete to create the elegance of the 1920s."

Some designers are reluctant to use precast concrete because such large panels can be daunting to handle, he says. But he revels in detailing the large expanses, which then save time in erection. "If you just put in joints every 15 to 20 ft, you lose the scale of the structure," he explains.

Park Tower in Chicago, Ill., which combines a hotel, condominiums, and retail, is one of the tallest buildings in the world to be clad with architectural precast concrete panels. The structure features 3152 pieces of precast concrete.

PROJECT SPOTLIGHT

Park Tower

Location: *Chicago, Ill.*

Project Type: *Mixed-use hotel/condominiums/retail*

Area: *67 stories, 825,000 ft²*

Designer: *Lucien Lagrange Architects Ltd., Chicago*

Owner: *Hyatt Development Corp., Chicago*

Contractor: *James McHugh Construction Co., Chicago*

PCI-Certified Precaster: *Precast Concrete Specialties Inc., Omro, Wis.*

Description: *At 844 ft, 2 1/2 in. high, Park Tower is one of the world's tallest buildings to be clad with architectural precast concrete. The panels were chosen for the 67-story mixed-use project in downtown Chicago due to constraints of time and budget while still achieving the stone appearance that designers desired. No one source could have provided enough stone to clad the building, and only an Italian quarry could have offered the standards that were demanded.*

The goal in designing the panels was to blend the new building with the nearby Water Tower, one of the few structures to survive the Great Chicago Fire of 1871. A golden-buff color was used to replicate the look of the tower's golden-colored stone, and it was used to clad both the base and much of the tower.

The building features curved balconies, which were faced with radiused precast concrete spandrel panels. The balconies also incorporate precast concrete coping and column covers. Radiused vertical panels make the transition between the hotel and the condominiums. Gray spandrel panels were placed just below the windows on the condominium floors.

The project was built on a fast-track basis, with construction beginning prior to final drawings being completed. Panels were restrained to a maximum weight of 26,500 lb to aid handling and lifting. Once 20 floors of cast-in-place concrete framing were erected, panel erection began, with total erection time taking about 14 months for 3152 pieces.

(For technical information on any of the Project Spotlights, contact the precaster listed in the Plant Certification Directory at the back of this issue.)

The 840 North Lake Shore Drive Tower in Chicago, Ill., features architectural precast concrete panels as well as cornices and decorative elements to replicate the look of French limestone used on the base of the 26-story building.

PROJECT SPOTLIGHT

840 North Lake Shore Drive

Location: *Chicago, Ill.*

Project Type: *Condominium building*

Area: *26 stories, 368,010 ft²*

Designer: *Lucien Lagrange Architects Ltd., Chicago*

Owner: *LR Development Co., Chicago*

Contractor: *James McHugh Construction Co., Chicago*

PCI-Certified Precaster: *Gate Precast Co., Winchester, Ky.*

Precast Specialty Engineer: *Computerized Structural Design, Milwaukee, Wis.*

Description: *Some 560 architectural precast concrete panels and other precast concrete components were used to clad this 26-story residential building in Chicago's Near North neighborhood overlooking Lake Michigan.*

The majority of the precast concrete components were window panels, with spandrels, cornices, and other ornamental pieces included. Relief work in the panels added both depth and definition through deep window returns and elegant cornices made from precast concrete. The building's style was also enhanced with radiused rotunda spandrel panels, which turn the corner to create a seamless appearance.

The panels' finish emulates the natural French limestone used at the base, which provided a template for creating the building's stone-pattern appearance in texture and color on the panels.

Precast concrete panels were chosen for several reasons, including time and cost savings, as well as architectural detailing capabilities, consistency and high quality, and staging and installation efficiencies.

"You have to add detail and texture to create a human scale to make it attractive. Stone blocks used to provide that, and precast concrete helps us recreate that look, plus it adds other touches. Today, there aren't enough money or masons to create the look that precast concrete can supply."

Park Hyatt Was First

The firm's work with precast concrete began in 1995, when it designed the Park Hyatt Tower along Michigan Avenue in downtown Chicago. "We knew we wanted a very high-end look, and that meant some type of cladding," he says. The designers reviewed various options and considered the surrounding buildings: Water Tower Place, One Mag Mile, Olympia Center, and 900 N. Michigan Ave. "They were all built with stone, but we wanted more detail than those flat facades could provide."

They selected architectural precast concrete panels and have been pleased with the results and the reactions ever since. "We were at first concerned that the public—especially the residence buyers—would be reluctant to accept it as the cladding on the building, compared to the stone on the others. But the people loved it. Then we began doing other projects the same way, and now it is very accepted. Only very discerning eyes can tell the difference between the stone on the first two floors and the precast concrete on higher levels."

Part of that blending results from the close attention to detail and high level of quality that precasters achieve today, he notes. "Formwork has been refined, and there is a good range of capabilities in the market." Returns and L-shapes create the most challenges, but the precasters that the firm works with always achieve the desired results. "They produce work that is very well done, and they're getting better and better. You have to know how to create the pieces and work closely with the precaster, as the designs can create challenges. You have to work out how you will hang the pieces and where the joints will be, but you can become familiar with the needs quickly."

Blending stone and precast concrete doesn't present any challenges, he notes. "We use the stone on the first two levels and precast concrete up from there, and we simply select the stone and ask the precaster to match it. It's an easy way to do it." It also retains its appearance well, he adds. "Our first exposure was with the Park Hyatt, and it is aging very well. It's not showing any discoloration or staining of any kind. Our experience has shown that it does very well over time."

In some cases, the precast concrete is used as a backing for stone or granite on the first level as well, he notes. On the Pinnacle project, for instance, the original concept was to feature stone on the first level and precast concrete above, but it was found that the stone needed addi-

tional support. So precast concrete panels were installed behind the stone to anchor it in place.

Precast concrete works well in the urban environment in which Lagrange has done so many of his projects. "We've had no problem bringing panels into the city and maneuvering them, and that method keeps the site much less congested," he says.

Blending Functions

Many of Lagrange's projects feature mixed-use concepts, with a blend of residential units, hotel suites and amenities, retail, and other services. "The strongest combination we have found for the downtown area is residential condominiums and hotel rooms, because you can use the hotel's services for the condominiums' residents at the high end of the market," he explains. "It creates an attractive group of services for condominium residents to have their own home but have a maid come in to make the bed, for example." Concierge services and access to other hotel services also are provided.

Finding the most successful ratio among various functions depends on the market and location, he adds. "Based on market demand, we typically aim for 200 hotel rooms; beyond that, it is too large. Along with that, we try to keep the number of condominiums to about 100 or less." The designers' recent Elysian project featured 188 hotel rooms and 53 condos, he notes. "That was a perfect combination. It provides an elegant scale for the building and can offer exclusive services at that size."

Retail is usually offered on the first floor for several reasons, he adds. First, there is good demand for retail space in the high-traffic, exclusive downtown areas in which many of the projects are located. It generates revenue for the developer and brings activity and excitement to the location for residents and visitors. In addition, there aren't many amenities that developers want to offer on the ground level.

"Storefronts are a good use of that space, because the lobby doesn't take up much space, and guests do not want to stay on the first floor," he points out. In some locations, such as the residential neighborhood around 840 North Lake Shore Drive, maisonettes were provided where retail otherwise would have been placed along the first floor. "Those worked very well to provide appealing space on that level."

Precast concrete can also be used to provide fire separation between parking and residential floors in mixed-use projects. Although Lagrange has not used structural precast concrete in many projects, he did create a 1500-car precast

PROJECT SPOTLIGHT

The Pinnacle

Location: *Chicago, Ill.*

Project Type: *Residential/retail building*

Area: *48 stories, 518,000 ft²*

Designer: *Lucien Lagrange Architects Ltd., Chicago*

Owner: *The Fordham Co., Chicago*

Contractor: *AMEC Construction Management Inc., Chicago*

PCI-Certified Precaster: *Precast Concrete Specialties Inc., Omro, Wis.*

Description: *This 48-story residential tower is located near Chicago's Magnificent Mile and features a French limestone base with architectural precast concrete panels cladding the upper floors. Precast concrete panels were also used as a backing on the limestone at the ground floor. Gothic spires and wrought-iron balconies complement the look, blending the building with the nearby Cathedral District.*

Each panel has one of two finishes, with those on lower floors featuring French limestone inlays, while upper floors feature an acid-etched finish. Limestone inlays were also provided on the archways that set off the ground-floor entries and facade. About 230 panels were used on the project, encompassing 22,700 ft² and more than 29 million pounds of precast concrete.

The Pinnacle residential tower in Chicago, Ill., features architectural precast concrete panels in two finishes to complement the French limestone at the base and blend the building with the nearby Cathedral District.

concrete parking structure for the Grand Victoria Casino in Elgin, Ill. "The casino had a very grand style that we could replicate by using precast concrete arches on the facade, and we could create a good structure with it as well. It was easier to build and faster to create the project using precast concrete."

Looking Overseas

Although the design firm receives many commissions from repeat customers, the residential market has begun to slow even for high-end urban locations, Lagrange notes. But that is not slowing down the firm's business, as the designer has begun looking outside the United States for new clients. He has received a commission for a residential project in Milan, Italy, and he also is working on one in Romania, for which he had earlier done a viability study.

"The Milan project is small, but it is a beginning," he says. "We hope to do more work in Europe. It is booming, and that's where we're going to go, because that's where the work is." Design work for such projects is handled by the Chicago office, with field work performed in conjunction with an associate architect in the local area.

As the company's work expands to international markets, it would not be surprising to find that Lagrange continues to use precast concrete designs wherever possible. "I love to work with precast concrete," he says. "It's a good material, and we're learning more about it every time we use it on a building. We hope to do more with it on new projects as they arise."

The benefits it provides can aid almost any type of building, he notes. "It helps create a better building overall. It makes the structure better insulated, acoustically more soundproof, more energy efficient, and better looking. All of those join to create a nicer building than other materials can provide." When the budget benefits are added in, it produces a result that means that the firm will be designing more Chicago buildings—and others around the world—using precast concrete to achieve the elegant period look for which Lagrange is so well known. ■

For more information on these or other projects, visit www.pci.org/ascent.

The Elysian Hotel & Private Residences in Chicago, Ill., features architectural precast concrete panels and a distinctive motor court to provide European elegance for the downtown building.

PROJECT SPOTLIGHT

The Elysian Hotel & Private Residences

Location: *Chicago, Ill.*

Project Type: *Hotel and condominium building*

Area: *61 stories, 638,000 ft²*

Designer: *Lucien Lagrange Architects Ltd., Chicago*

Owner: *Elysian Development Group LLC, Chicago*

Contractor: *James McHugh Construction Co., Chicago*

PCI-Certified Precaster: *Precast Concrete Specialties Inc., Omro, Wis.*

Description: *The combination of hotel and residential functions allows residents of The Elysian to take advantage of hotel services. Half of the 188 two-room hotel suites on 19 of the floors are condominium units owned by part-time residents and operated as hotel units when they are away. The principal design challenge was to develop program areas and facilities that balanced the differing expectations and needs of the various guests.*

Architectural precast concrete panels, which are still being erected, were used on the exterior to achieve highly textured, carefully composed elevations. At the ground level, a richly detailed, architecturally defined motor court was inspired by the French model, offering an outdoor vestibule. The architectural panels received an acid-etched finish to resemble cut stone, with intricate details provided in the panels at ground level to add visual interest.

Approximately 2250 precast concrete components will be used in the structure, including window units that are about 100 ft² apiece. The largest panels encompassed 250 ft², with erection from bottom to top moving smoothly. Completion is scheduled for fall of 2009.

PROJECT SPOTLIGHT

10 East Delaware

Location: *Chicago, Ill.*

Project Type: *Residential building*

Area: *35 stories, 424,836 ft²*

Designer: *Lucien Lagrange Architects Ltd., Chicago*

Owner: *The Prime Group, Chicago*

Contractor: *Evans Construction/Consulting, Chicago*

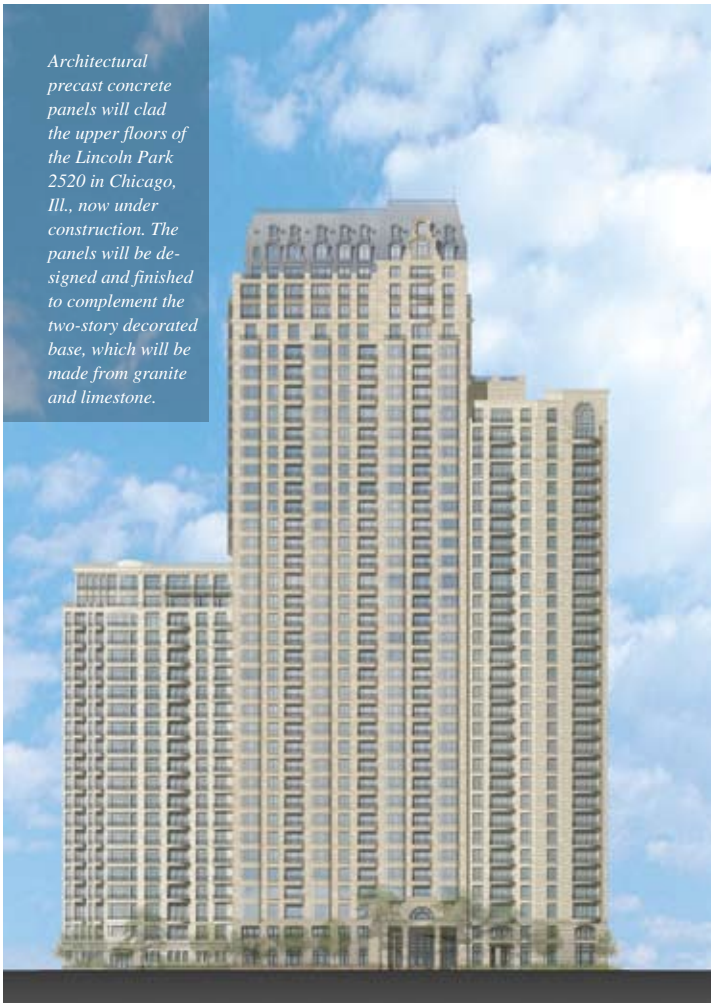
PCI-Certified Precaster: *Lombard Architectural Precast, Alsip, Ill.*

Description: *This 35-story project, located just north of Chicago's Loop, features 121 residences designed to invoke a European feel. The building's facade features architectural precast concrete panels on the ground floor and exposed cast-in-place concrete on floors 9 through 35.*

The project is currently under construction, with precast concrete being erected this summer. Approximately 16,000 ft² of precast concrete panels, in 164 pieces, are being erected. The panels are being fabricated with reveals to simulate the look of cast stone on floors 1 to 8 of the west and south elevations. The precast concrete at the base includes granite pieces 2 ft 7 in. high cast into the panels. The building is scheduled for completion in spring 2009.

The 10 East Delaware building, with 121 residences, features architectural precast panels from the ground floor to level eight to help invoke the feeling of a European-style appearance.

'Today, there aren't enough money or masons to create the look that precast concrete can supply.'



Architectural precast concrete panels will clad the upper floors of the Lincoln Park 2520 in Chicago, Ill., now under construction. The panels will be designed and finished to complement the two-story decorated base, which will be made from granite and limestone.

PROJECT SPOTLIGHT

Lincoln Park 2520

Location: *Chicago, Ill.*

Project Type: *Condominium building*

Area: *41 stories, 1.12 million ft²*

Designer: *Lucien Lagrange Architects Ltd., Chicago*

Owner: *Ricker-Murphy Development LLC, Chicago*

Contractor: *TBD*

PCI-Certified Precaster: *TBD*

Description: *This high-rise condominium building in Chicago's Lincoln Park neighborhood will be the first new tower in 30 years along an exclusive street facing the park from which the community takes its name. The 316-residence property will feature architectural precast concrete panels on its exterior, topped by a zinc-clad mansard roof. "Shoulders" of towers 21 and 30 stories tall will flank the central tower, with a base faced with granite and limestone uniting the towers.*

The towers will be clad with architectural panels complementing the stone base, which will feature a two-story entrance supported by classical columns. The precaster for the project is yet to be determined. The plan is to create 297 condos in the towers plus 19 townhomes bordering the street, and a 639-car parking structure with valet parking for residents and guests.