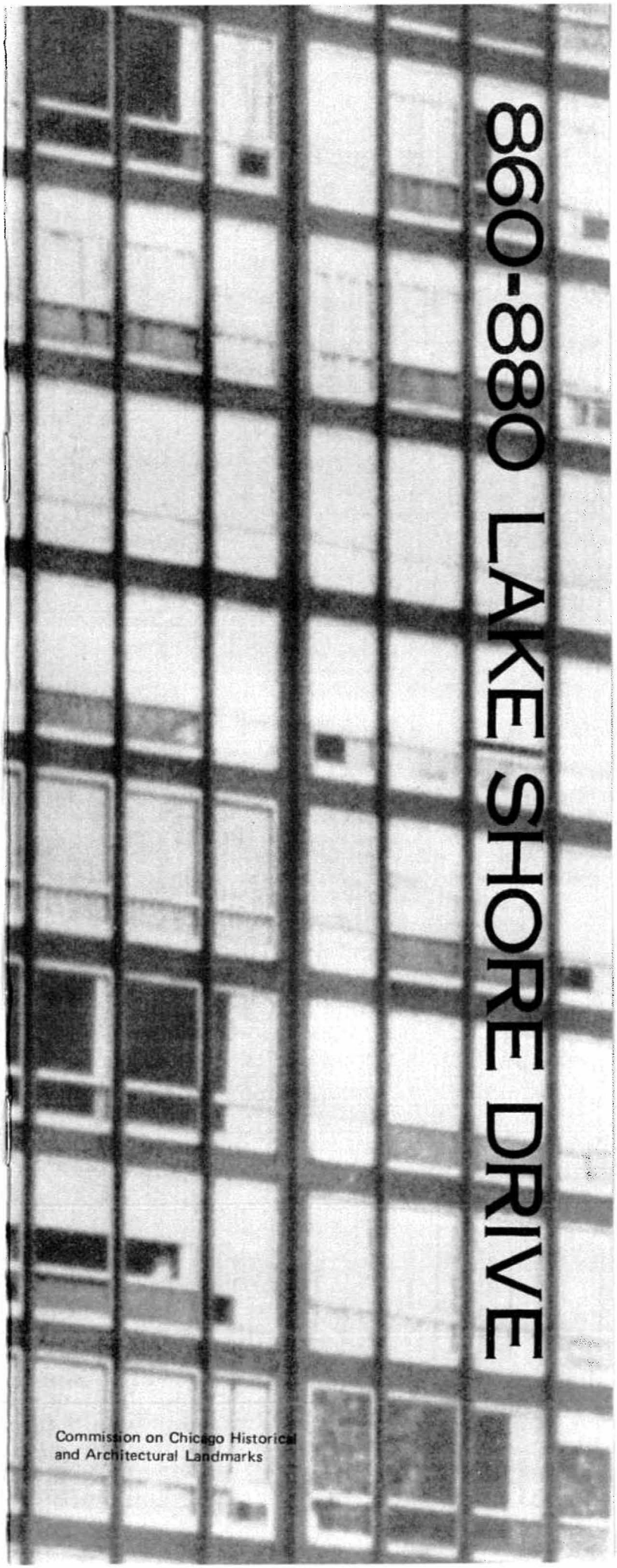

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860-880 Lake Shore Drive as seen from the shore of Lake Michigan.
(Michael J. Pado, photographer)

860-880 LAKE SHORE DRIVE

Ludwig Mies van der Rohe, architect

Associate architects:
Pace Associates
Holsman, Holsman, Klekamp and Taylor

Completed in 1951

Staff for this publication
Joan C. Pomaranc, *writer and designer*
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The buildings of Ludwig Mies van der Rohe revived in Chicago the tradition of rational design and clear expression of structure which had developed in this city during the 1880s and 1890s and was later called the Chicago school of architecture. The principles and achievements of the Chicago school were temporarily ignored as the movement faded from prominence during the first decades of the twentieth century, and their revitalization in the city of their origin was to come by way of Europe. The first and most forceful demonstration of Mies's ideas for tall steel and glass structures is found in the two apartment buildings at 860-880 Lake Shore Drive, built between 1949 and 1951. No other buildings by Mies had so immediate or so strong an impact on his American contemporaries, and the influence of the two buildings was to pervade much of modern architecture.

The Architect

Mies was born in the town of Aachen, Germany in 1886 and lived there for the first nineteen years of his life. Aachen had been established in the ninth century by the emperor Charlemagne as the first capital of the Holy Roman Empire. In the town, which was devastated during World War II, there were many medieval buildings that deeply impressed Mies as a boy. Many years after leaving Aachen, Mies remembered the old buildings of his childhood:

> Few of them were important buildings. They were mostly very simple, but very clear. I was impressed by the strength of these buildings because they did not belong to any epoch. They had been there for over a thousand years and were still impressive, and nothing could change that. All the great styles passed, but they were still there. They didn't lose anything and they were still as good as the day they were built. They were medieval buildings, not with any special character, but they were really *built.*

Mies's father was a stonemason, and Mies often helped in the family stonecutting shop. His early exposure to the practical side of building and his familiarity with the old stone buildings of Aachen left Mies with a respect for and a working knowledge of building materials which later marked his work and his teaching.

After finishing grade school, Mies spent two years at a trade school while also working for a local builder as a unpaid apprentice. He then found work as a designer of plaster ornament in numerous styles for a firm that specialized in stucco decor. After three years, however, he decided that architecture was his main interest, and he went to work for a local architect. In 1905, Mies moved to Berlin where he worked for two architects who specialized in wood buildings, and from them Mies acquired a thorough understanding of that material.

In 1907, the twenty-one-year-old Mies designed his first house that was actually built. According to a contemporary critic, the house was "so faultless that no one would guess that it is the first independent work of a young architect." The design was in keeping with the traditional style of the region, but the way in which the traditional elements were combined, as well as the siting of the house on a steep slope, were evidence of the skill of the young architect. Mies worked independently for the next two years, and in 1909 went to work for Peter Behrens. Le Corbusier and Walter Gropius, both of whom would later achieve architectural reputations as great as Mies's, also worked in the office during the three years Mies stayed with Behrens. Behrens, who was a designer as well as an architect, designed both products and structures for the A.E.G., the German electrical industry, and from him Mies learned to appreciate the mutual influence that could exist between architecture and industrial technology. Behrens was also designing large neo-classical buildings, usually for governmental agencies, based on the work of the greatest German architect of the nineteenth century, Karl Friedrich Schinkel. To Behrens, and later to Mies, Schinkel's buildings had a purity of form that was particularly relevant to the modern age in which architecture was becoming simpler and more straightforward. They also admired the way Schinkel placed his buildings on wide platforms, a technique which made the structures more impressive. In addition to being influenced by the ideas of Schinkel and Behrens, Mies also studied the work of the Dutch architect H. P. Berlage whom he encountered during a year spent working in Holland. Berlage stressed the honest use of materials, especially brick, and clear construction as the fundamental principles of architecture. Under the influence of Berlage's ideas, Mies became increasingly dissatisfied with the neoclassical overlays of Schinkel which he and Behrens had been using. From Berlage, Mies learned to accept structure as the essential element in architecture.

Mies opened his own office in Berlin in 1913 and returned to it after serving as an army engineer during the First World War. There was little actual building in Germany after the war, but the political revolution which soon followed was accompanied by a revolution in the arts, including architecture. Mies's experimental projects during these years were among the most crucial for modern architecture. Between 1919 and 1921, he developed sketches for two all-glass skyscrapers, one of twenty stories and the other of thirty. These radically innovative, almost prescient drawings were exhibited soon after they were made, and they brought Mies to the forefront of the modern movement. Peter Blake, in his biography of Mies, states that the sketches of the 1920s were so daring that "modern architecture, quite literally, has not been the same since...For here, with a single stroke of the pen, as it were, Mies laid the foundation for all the great steel-and-metal skyscrapers we see about us today." Thirty years later, these projects would result in the two buildings at 860-880 Lake Shore Drive which were to have a stronger impact on contemporary architecture than any other of his buildings. They would be the first demonstration of what Mies was trying to say in the drawings of the 1920s; they are the strongest, clearest, and as Blake puts it, "most deceptively simple expression of his ideas that he ever made."

In 1926, Mies was appointed the first vice-president of the Deutsche Werkbund, an organization created by a group of architects, artists, and industrialists to improve the quality of German product design. Three years later, the German government selected Mies to design the German pavilion for an international exhibition to be held in Barcelona that year. Mies decided that the building itself, rather than any displays within it, would constitute the exhibit. He also designed several pieces of furniture to be placed within the pavilion, and the chair he designed, thereafter called the "Barcelona chair," has become famous. The resulting small, one-story structure, with its rich materials and its open plan, represented a new kind of spatial composition and showed Mies's greatness as an architect.

As a result of his success with the Barcelona Pavilion, Mies was appointed director of the Bauhaus the following year. Originally known as the School of Arts and Crafts, the institution had been transformed after the war under the leadership of Walter Gropius who renamed it the Bauhaus (the House of Building), in which architects, craftsmen, artists, and designers could work together. The school was located in Dessau, but in 1932, when the Nazis gained control of the province and began to accuse the school of being "un-German," Mies moved the Bauhaus to Berlin. Soon the school was under attack there also and in 1933 Mies closed the Bauhaus entirely. He remained in Germany for four more years, building a few small houses and working on projects which were never executed. In 1937, Mies was invited to become director of the School of Architecture at the Armour Institute of Technology in Chicago, and the following year he left for the United States.

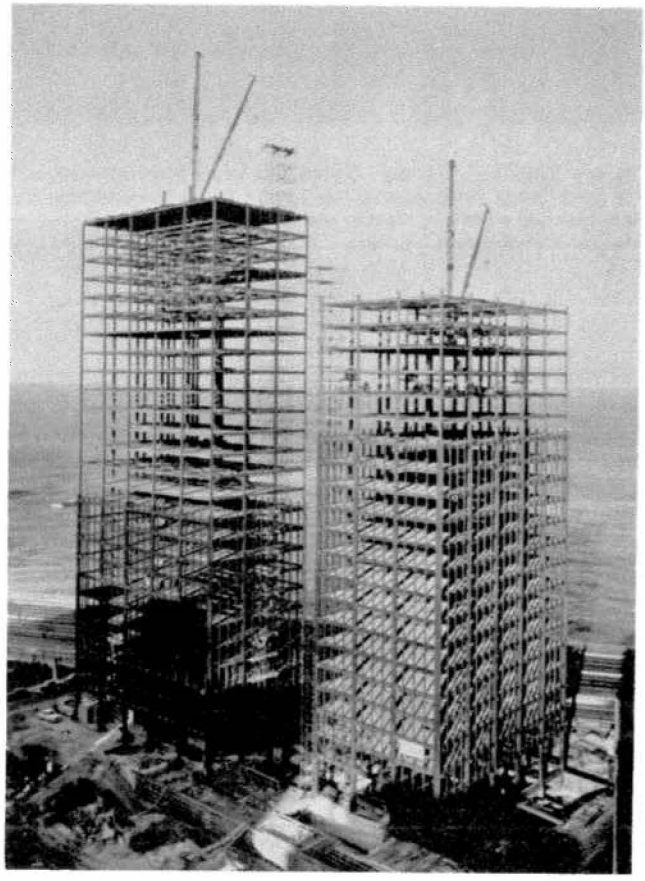
In 1940, the Armour Institute merged with Lewis Institute to form the Illinois Institute of Technology, and Mies was given the commission to plan a new campus for the school. Many of his buildings for IIT were built during the twenty years he taught there, before his retirement in 1958. At the time of his death in 1969, Mies had designed twenty-two buildings for IIT in addition to numerous other buildings in the Chicago area: one building at the University of Chicago, fourteen apartment towers, two corporate office buildings, the three structures of the Federal Center, one private residence, and the interior of the Arts Club of Chicago. He also designed buildings in New York; Baltimore; Washington, D.C.; Detroit; Houston; Des Moines; Montreal; Toronto; Mexico City; and Berlin.

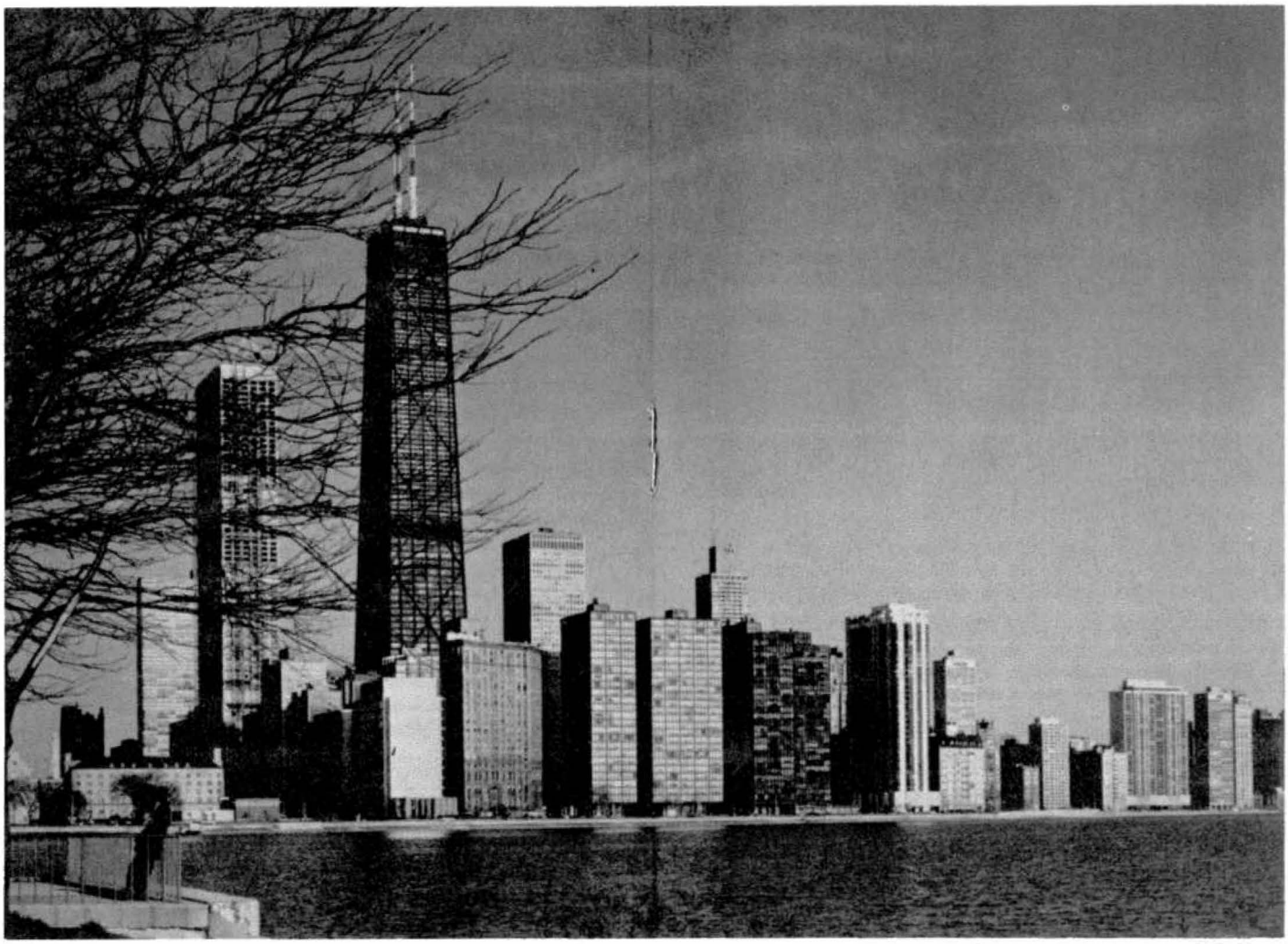
The Buildings

In 1946, Mies met and befriended a young real estate developer, Herbert Greenwald. From the start the two men got along well because, according to Mies, Greenwald was not a builder interested mainly in profit, but was rather an idealist who wanted to "leave his stamp on the scene" by creating the finest architecture possible within the framework of modern technology and economics. Two years after Mies and Greenwald met, the first building Mies designed for Greenwald, the Promontory Apartments, was constructed in Chicago on South Shore Drive near 56th Street. The twenty-two-story building has a reinforced concrete frame with the columns exposed on all elevations. The columns stand out from the main wall plane which is composed of horizontal windows and brick panels beneath the windows. The columns are stepped back as they rise to the roof line and as the loads lessen. Mies had drawn two versions of the Promontory Apartments. One depicted the concrete form actually used; the other showed a steel and glass exterior wall on the long elevations, the first example of his use of the curtain wall that was to appear frequently in later projects.

While the Promontory was under construction, Mies designed the two buildings at 860-880 Lake Shore Drive, his second project for Herbert Greenwald. This plan developed from the alternate version of the Promontory and from the drawings of the 1920s for two glass towers. Construction of the two buildings, generally referred to simply as 860, began in December, 1949. The twenty-six-story rectangular towers are set a short distance apart, with their long sides at right angles to each other, and are connected by a canopy. The apartment floors are carried on a steel skeleton whose measurements are the governing principles for the exterior design of the structure. The long sides of the

Construction of the two buildings began in December, 1949. The steel sections of the facade were prefabricated in sections one bay wide and two stories high, hoisted up at the site, and then welded to the skeleton. The window frames were fitted in from within the framework.
(Photograph courtesy of Hedrich-Blessing)





This photograph of Chicago's skyline was taken from Olive Park, located on the city water filtration plant which projects into Lake Michigan. 860-880 Lake Shore Drive and 900-910 Lake Shore Drive, which Mies designed in the mid-1950s, are seen in the center of the picture, surrounded by other high-rise buildings, most of which have been built in the last twenty-five years.
(Michael J. Pado, photographer)

buildings are divided into five bays and the short sides into three bays, each bay twenty-one feet wide. This clear expression of the structural skeleton establishes the first division of the buildings total volume, and is emphasized at the ground level by the columns that stand free of the recessed walls of the lobby, forming an arcade around the base of the building. Each bay is divided into four parts, with the two outer sections nine inches narrower than the two center panes. This variation is not the result of a structural requirement, but rather is a creative element of the design.

The horizontal pattern of the windows is subordinate to the vertical lines of the columns. The strong vertical emphasis of 860 is due to the narrow vertical I-beam rails, which rise from the second floor to the roof line, welded to the columns and mullions. It was the application of these I-beams that made the towers "the most vertical-looking skyscrapers up to that time," in the words of Peter Blake. The use of the I-beams to produce the desired appearance on the elevations was determined by a requirement of the Chicago building code at the time: steel-framed buildings had to be fireproofed with two inches of concrete all around the structural steel. If Mies had left the buildings with the concrete exposed, the result would have been two ungainly cages of concrete filled with glass, without a strong sense of height and upward motion.

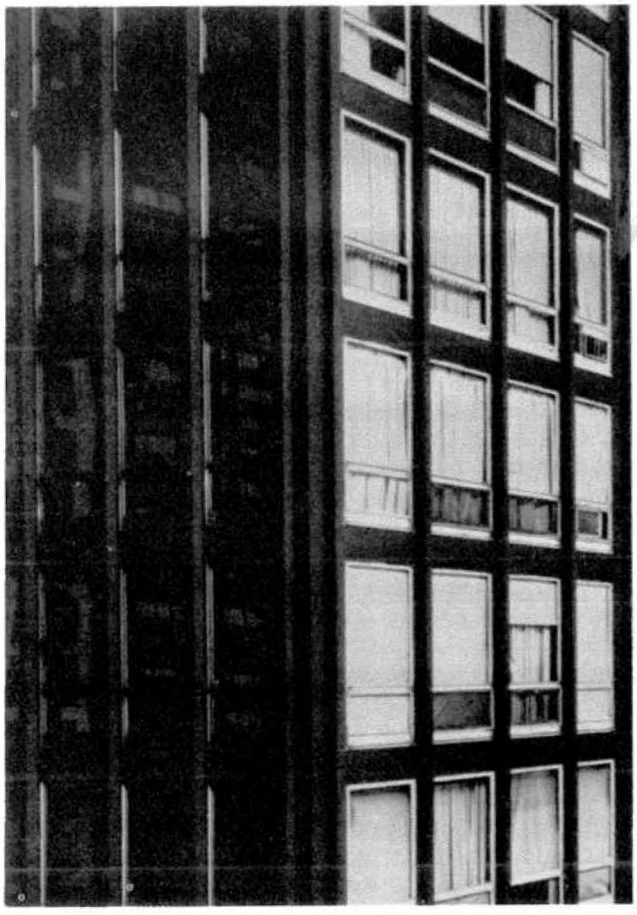
To solve the problem of the concrete covering, Mies finished the concrete-covered columns and mullions with black steel plate, and then welded on to the plate I-beams eight inches deep. To those who were shocked at the way Mies had used a structural material, steel, as applied ornament, the architect gave both a *good* reason for the I-beams and the *real* reason. Where the I-beams formed window separations, they make perfectly good sense. A metal rail is needed to separate the windows, and the mullions, Mies explained, might just as well be deep and narrow instead of wide and flat. As for taking those same deep and narrow

I-beams and welding them on to the steel that covers the concrete, which in turn covers the structural column, Mies explained further:

> It was very important to preserve and extend the rhythm which the mullions set up on the rest of the building. We looked at it on the model without the steel section attached to the corner column and it did not look right. That is the *real* reason. Now, the other reason is that this steel section was needed to stiffen the plate which covers the corner column so this plate would not ripple, and also we needed it for strength when the sections were hoisted into place. Now, of course, that's a very *good* reason, but the other reason is the *real* reason!

Placing the I-beams completely outside the frame produces a changing pattern of light and shadow on the facades of the towers. Seen head on, the walls appear open and lightweight; as the viewer moves around the building, the receding wall becomes solid and dark.

A detail of a corner segment of 860. Each bay has four windows, with I-beams forming the mullions between the windows and covering the piers between the bays. All apartments are supplied with light colored curtains to give a uniform appearance to the buildings.
(Michael J. Pado, photographer)



The 880 building is seen through the glass walls of the 860 lobby. The lobbies of both buildings are furnished simply with Mies-designed furniture and with plants. Slabs of travertine cover the floors.
(Photograph courtesy of Hedrich-Blessing)

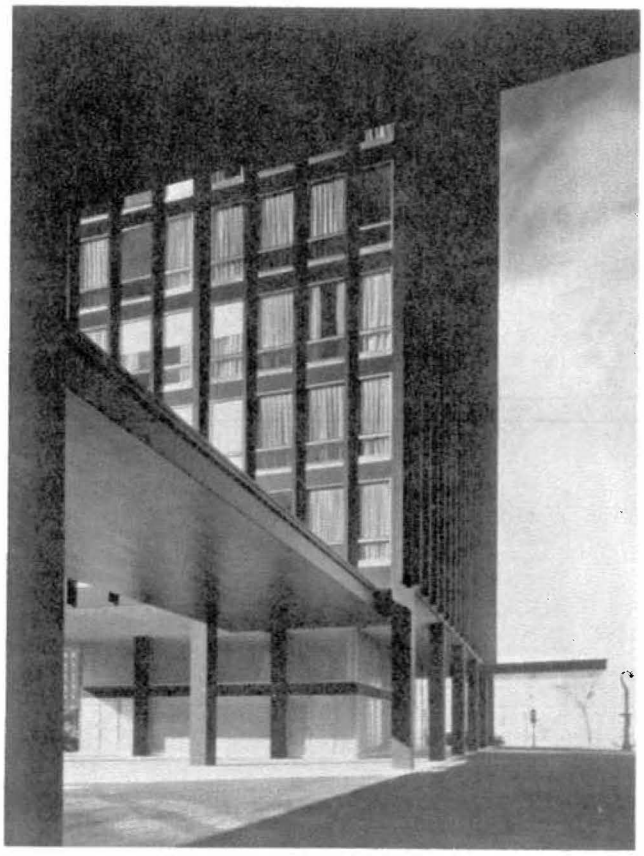
The steel plates also served a practical function. They were used as forms into which the required concrete was poured. Prior to the construction of 860, these forms were usually made of wood and had to be removed after the concrete hardened. Then the concrete had to be finished with some facing material to make it look less rough. By using forms of steel plate and welding the I-beams to the plates before they were put in place, Mies fulfilled two ends by the same means.

Floor-to-ceiling windows of glass are set into aluminum frames within the skeleton. In order to have a uniform appearance on the outside, all apartments were furnished with curtains of the same pale color, with a second curtain track inside the first for tenants who might want their own curtains. Though the building presents a uniform pattern to the outside world, each apartment plan is flexible because of the wide and regular spacing of the columns. The north building was designed with eight three-and-one-half-room apartments on each floor, and the south building with four six-room apartments on each floor; in some cases apartments have been combined to form larger units. In 1957, *Life* magazine printed an article on Mies and included several photographs of 860 taken at night. Each apartment was seen to be decorated in an entirely different manner: some had antiques and applied moldings on the walls and doors while others contained Mies-designed chairs and tables; the lobbies are furnished with Barcelona chairs and tables. These apartments are an example of Mies's theory of universal space, a space which is capable of many functions at one time and allows for changes of function over a period of time. Such versatility makes it possible for a building to be easily adapted to a new use rather than replaced.

The two buildings were set up as a cooperative, in which the owners purchase a share of the entire property and pay an additional monthly service fee for their particular apartment. When 860 proved to be a financial as well as an aesthetic success, Greenwald commissioned Mies to design more buildings in Chicago. In 1952, the six buildings of the Algonquin Apartments on Hyde Park Boulevard were completed; the two buildings of Commonwealth Plaza at Sheridan Road and Diversy Parkway were built between 1955 and 1958; at the same time, the two buildings known as the Esplanade Apartments, at 900-910 Lake Shore Drive, across the street from 860-880 Lake Shore Drive, were constructed. The Esplanade buildings have flat-slab concrete frames which appear on the elevations as thin black bands marking the outer edges of the floor slabs, and black anodized aluminum was used for the window frames and I-beams. In addition to these apartment buildings, Mies worked with Greenwald on several urban redevelopment schemes for other cities. Their successful partnership was ended prematurely in 1955 when Greenwald was killed in an airplane crash.

To the architect Richard Neutra, the 860-880 towers "appeared like the wonderful conclusion of a lifelong aspiring formation of ideas. It is a moral force which sets the Miesian production apart; it is not mere formal abstraction." According to Mies, an orderly building can be a powerful force for greater order in the world around it. Both the design and siting of 860-880 express this idea. Although the site is not large, there is a sense of a wide open space at ground level which is due to the arrangement of the two structures at right angles to each other. This is in marked contrast to the usual arrangement of structures along Lake Shore Drive: close-ranked in a line, resulting in a wall of tall buildings which cuts off areas farther inland from contact with Lake Michigan. There is a feeling of easy access to the buildings because the lobbies are flush with the surrounding pavement. Seventeen-foot-high walls of clear glass set well back from the supporting columns provide a clear transition between exterior and interior space but also integrate the two. The buildings are separate, yet joined by a canopy and the paved area around them. A 1963 article on "Mies' Urban Spaces" states that 860 suggests a new urban pattern which is "in scale with the pedestrian as well as the fast moving traffic of the major thoroughfare." Mies's plan for the campus of IIT and the Chicago Federal Center make similar city planning statements on a larger scale, all within the context of existing conditions.

The "Glass Houses," as the buildings were nicknamed, were not only radically new in terms of form but also as a type of habitation. In November, 1951, the author of a *Chicago Tribune* article headlined "People *Do* Live in Glass Houses!" wondered about the psychological effect of living "high in the air with no solid walls to mark off one's living quarters from the abyss outside. This is the farthest man has ever got from his cave dwelling days." The author of the article had no answer to his question. Even now, twenty-five years later, when tall apartment buildings are an accepted part of the cityscape, the debate over the effects of high-rise living, on both those who live in such buildings and on the whole city environment, continues.

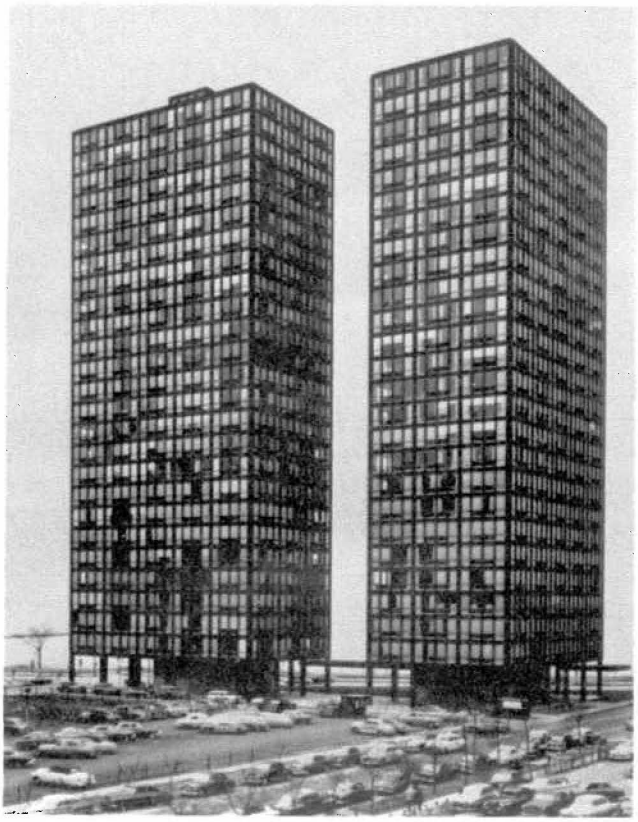


Travertine slabs, like those in the lobbies, are used around the base of each building and for the walkway between the two. A canopy connects 860 and 880, so that the buildings, while separate, are joined. The projecting canopy over the entrance to 880, and the identical one over the entrance to 860, repeats the shape of this connecting element.
(Photograph courtesy of Hedrich-Blessing)

Mies believed that architecture is "the will of an epoch translated in space," and at its highest level expresses the moving forces of that epoch. The driving force of the present time, he believed, is its striving for universality, and contemporary architecture must express this character if it is to be valuable. These ideas are the operating principles of 860-880 Lake Shore Drive, externally and internally. The appearance of the buildings is a result of their structure and a technology that is universally applicable. Mies stated that his intention was to reverse the catch phrase "form follows function," derived from the ideas of Louis Sullivan. He said,

> We reverse this and make a practical and satisfying shape, and then fit the functions into it. Today this is the only practical way to build because the functions of most buildings are continually changing, but economically the buildings cannot change.

The buildings at 860 became prototypes for steel and glass skyscrapers around the world, though the derivatives do not always live up to the high standards of their source.



This photograph of the two buildings was taken shortly after their completion, before any other tall apartment buildings were constructed on the block.
(Richard Nickel, photographer)

The original buildings are, as Blake put it, deceptively simple. Walter Peterhans, who taught with Mies at IIT, wrote of 860 soon after they were constructed:

> These towers testify to a new and until now unknown spirit. They are built out of the familiar materials, steel and glass, and yet it is as though they introduce the era of steel and glass, as if steel and glass are seen for the first time.

By transforming these familiar materials into a new and classic form at 860-880 Lake Shore Drive, Ludwig Mies van der Rohe shaped a major part of the architecture of the second half of the twentieth century.

The Commission on Chicago Historical and Architectural Landmarks was established in 1968 by city ordinance, and was given the responsibility of recommending to the City Council that specific landmarks be preserved and protected by law. The ordinance states that the Commission, whose nine members are appointed by the Mayor, can recommend any area, building, structure, work of art, or other object that has sufficient historical, community, or aesthetic value. Once the City Council acts on the Commission's recommendation and designates a Chicago Landmark, the ordinance provides for the preservation, protection, enhancement, rehabilitation, and perpetuation of that landmark. The Commission assists by carefully reviewing all applications for building permits pertaining to designated Chicago Landmarks. This insures that any proposed alteration does not detract from those qualities that caused the landmark to be designated.

The Commission makes its recommendations to the City Council only after extensive study. As part of this study, the Commission's staff prepare detailed documentation on each potential landmark. This public information brochure is a synopsis of various research materials compiled as part of the designation procedure.