

Edith Farnsworth House
Fox River, at intersection of Fox River
Road and Milbrook Road
Plano vicinity
Kendall County
Illinois

HABS No. IL-1105

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ILL,
47-PLAN.1
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

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HISTORIC AMERICAN BUILDINGS SURVEY

EDITH FARNSWORTH HOUSE

HABS No. IL-1105

Location: The Farnsworth House is located on the Fox River at the intersection of Fox River Road (R.R. 2) and Milbrook Road near Plano, Illinois, in Kendall County. It is some 52 miles southwest of Chicago.

Present Owner: Peter G. Palumbo, 37A Walbrook, London E.C. 4, England.

Present Use: It is a weekend house.

Significance: Conceived in 1946, the Farnsworth House was intended to be a prototype for all glass buildings. Though small in size, it is monumental in its purity of form, refinement of detailing, sumptuous materials and flawless craftsmanship. The floor plan is completely open, and the structure is directly expressed.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Original and subsequent owners (chain of title):

a. Legal description: The legal description for the land currently occupied by the Farnsworth House is as follows:

That part of the southeast quarter section 34 and a part of southwest quarter section 35, all in Township 37 North, Range 6, East of the Third Principal Meridian, described as follows: commencing in the center of Section 34, thence along the quarter section line 924 feet south to the center line of the River Road for the point of beginning; thence easterly along said line 236.13 feet; thence N84°24' East along said center line 1099 feet; thence N88°50' East along said center line 530.15 feet, thence N74°50' East along said center line 1275.80 feet; thence S1°21' East 1200.6' to the Northerly bank of the Fox River; thence to the center line of the Plano-Milbrook Road as established by plat recorded August 17, 1967, in Book 12 of plats, p. 53 as Document #156304; thence northerly along said center line to the center line extended Westerly of the said River Road; thence Easterly along the extension of and the center line of said River Road to the point of beginning; (except that part lying Westerly of the Easterly line of said Plano-Milbrook Road as established in proceedings filed in the circuit court for the 16th Judicial Circuit, Kendall County, Illinois, as Cast #67-456); in the Township of Little Rock, Kendall County, Illinois.

- b. The abstract of the chain of title is from the Kendall County Recorder of Deeds, Court House, Yorkville, Illinois 60570.

Two major transactions have taken place pertaining to transfer of title for the property. The first was recorded February 18, 1946. Robert R. and Marilyn Mathison McCormick conveyed the land by Deed to Edith Farnsworth (Book 101, p. 263). The second was recorded July 27, 1971. Dr. Farnsworth, by power of attorney, conveyed the land by Warranty Deed to John R. Campbell, (Microfilm #71-2637).

2. Date of erection: Construction of the Farnsworth House took place between 1949 and 1951, though discussion about the house began much earlier. Files located in the Office of Mies van der Rohe contain a letter from Mies to Dwight Green, then Governor of Illinois, indicating that he had been commissioned by Dr. Farnsworth to design a house for her; that letter is dated March 2, 1946. In addition, Chicago architect Myron Goldsmith, who entered Mies' office in 1946, remembers seeing a water-color sketch for the house at that time.

In July 1949, plans were first drawn up for the house. Construction started soon after. In the Office of Mies van der Rohe there is an application dated October 17, 1949, by Dr. Edith B. Farnsworth, 148 East Ontario, for a county zoning permit for improvements costing \$60,000 for a residence. A final statement of construction costs, for \$74,167.95, is marked with the date February 20, 1951. Blueprints of cabinetry detailing are dated as late as August 1951.

3. Architect: The architect for the Farnsworth House was Ludwig Mies van der Rohe.
4. Builders, suppliers, etc.: The mechanical engineers for the Farnsworth House were Bueter & Wolff. All the names of the contractors and subcontractors can be found in files in the office of Mies van der Rohe. The general contractor was Karl Freund. Among the suppliers were: Lewis Service, plumbing and heating; Wendnagel & Co., structural steel; Acme Marble, travertine floors; Western Architectural Iron Co., and the Pittsburg Plate Glass Company.
5. Original plans: All of the original drawings and blueprints are in the collection of the Office of Mies van der Rohe, 111 East Wacker Drive, Chicago, Illinois.
6. Alterations and additions: There are no records of either the original building permit or of subsequent alterations in the Kendall County Building Department. Between 1971 and 1974,

the house was restored to its original condition. All records detailing these efforts are in the Office of Mies van der Rohe, supervisory architects for the changes.

7. Important old views: Numerous photos of the Farnsworth House have been published. The best are to be found in Werner Blaser's Mies van der Rohe, the Art of Structure and Ludwig Hibleseimer's Mies van der Rohe.

Many interesting unpublished photos of the house are located in the Office of Mies van der Rohe. These include: photos of Dr. Farnsworth and Myron Goldsmith looking at blueprints for the house; photos of the model, which was extensively damaged and subsequently discarded in 1956; construction photos dated April and May of 1950; and a water-color sketch photographed January 28, 1947 by Hedrich Blessing, Chicago (Neg. #9970).

Beautiful photographs of the house in its present, refurnished, condition have been taken by Yukio Futagawa, ADA Edita Tokyo Co. Ltd., 3-12-14 Sendagaya, Shibuya-ku, Tokyo, Japan. The unpublished prints are in the Office of Mies van der Rohe.

B. Persons of Interest and Historical Events Connected with the Structure:

Dr. Edith B. Farnsworth, Mies' client, was a practicing physician and Assistant Professor of Medicine at Northwestern University on the Near North side of Chicago. Myron Goldsmith remembers her as an intelligent, cultured person who wanted a week-end house to which she might eventually retire. She retired in 1971, to the Tuscan hillside around Florence, where she is translating Italian poetry into English and writing her own.

Although the house Mies designed for Dr. Farnsworth was carefully conceived and took six years to design and build, the warm friendship they initially had deteriorated quickly. It terminated in a lawsuit and countersuit over construction costs. The fight officially began in July 1951, when Mies sued the Doctor for non-payment; she countersued for the difference between the cost allegedly contracted for and what she is said to have spent. The suit was ultimately settled in Mies' behalf, but not without some bitter recriminations in public and private on the part of Dr. Farnsworth. She is quoted in the June 8, 1953, issue of Newsweek: "Under the slogan of simplicity," she complained, "this theory of architecture has discarded the accumulated wisdom of building. This handsome pavilion I own is almost totally unworkable. There is a certain brutality about having the outside inside....The windows steam up in the winter and drive you crazy. You feel as though you are in a car in the rain with a windshield wiper that doesn't work...." In an interview with House Beautiful, (April 1953) she launched a scathing

attack on the International Style titled "The Threat to the Next America." Peter Blake, in Mies van der Rohe, discusses the article at some length. Blake quotes Dr. Farnsworth's comments: "Something should be said and done about such architecture as this or there will be no future for architecture....I thought you could animate a predetermined, classic form like this with your presence. I wanted to do something 'meaningful,' and all I got was this glib, false sophistication."

Mies took exception to Farnsworth's dissatisfaction with the house; in a letter dated September 30, 1949, he sent to Beuter, his mechanical engineer on the project, Mies wrote, "This house is much more important than the size or cost would indicate. It is a prototype for all glass buildings." Mies stated that he'd been working on the house over three years and spent thousands of hours on it. "In the end, however, the success of the house and its future development will depend upon how certain practical problems are solved. Among these, the problems of plumbing, heating and ventilation are of great importance. For if the house is too hot in summer, or too cold in winter, for all practical purposes the fault will be charged to the fact that the mechanical problems were not properly solved...."

When the house was completed, diverse opinions were expressed by the country's most popular home magazines. The February 1952 issue of House and Garden devoted several pages to the Farnsworth House in an extensively-illustrated article titled "A Glass Shell that Floats in the Air. Calling the house "one of the most uncompromising modern houses in existence," the magazine noted that "It couldn't be built in any age but ours." In contrast to this article praising the house, House Beautiful, in the previously mentioned article damning "the mystical idea of 'less is more'." Elizabeth Godfrey, the author, wrote, "I have talked to a highly intelligent, now disillusioned woman who spent more than \$70,000 building a one-room house that is nothing but a glass cage on stilts.

The viewpoint of professional architects was expressed by Architectural Forum, in its October 1951, issue. "To some it may look like 'nothing much,' just a glass sided box framed in heavy white steel; but to many partisans of great architecture it is the most important house completed in the U.S. since Frank Lloyd Wright built his desert home in Arizona a dozen years ago. For the Farnsworth House near Chicago has no equal in perfection of workmanship, in precision of detail, in pure simplicity of concept."

The Farnsworth House and 75 acres on the Fox River were put on the market in 1969 for \$250,000. At that time, Peter Palumbo, became interested in the property and corresponded with Mies' grandson, Dirk Loha, about purchasing it. He wanted to express his concern about cost, the mosquito problem and the possibility of housing developments being constructed nearby. In the summer of 1971, with these problems resolved, Palumbo bought the house and 62 acres for \$120,000. He spent \$20,000 to renovate the house and restore it to

its original condition. Since that time the old screens have been removed; there is a new roof; the exterior steel frame has been sandblasted and painted white; a new mechanical plant has been installed; the kitchen has been updated, and the entire house furnished with pieces either designed by Mies or specially designed for the house by Mr. Lohan. Mr. Palumbo has future plans to add a new link fence, a gravel drive and further landscaping.

C. Sources of Information:

1. Published material consulted:

Blake, Peter. Mies van der Rohe. Baltimore: Penguin Books, 1964.

Blaser, Werner. Mies van der Rohe: The Art of Structure. Zurich: Architectural Publishers, 1965. pp. 106-19.

Drexler, Arthur. Ludwig Mies van der Rohe. New York: George Braziller Inc., 1960. p. 28, figs. 78, 79.

"Fox River Floods Over," Kendall County News, Plano, Illinois. April 26, 1973.

"Edith Farnsworth Sues," Architectural Forum, (October 1951) pp. 156-162.

"Glass House Stones," Newsweek, (June 8, 1953) P. 90.

Gordon, Elizabeth, "The Threat to the Next America," House Beautiful, (April 1953) pp. 126-130, 250-251.

Hilberseimer, L. Mies van der Rohe. New York: The Museum of Modern Art, 1953. pp. 167, 170-71.

"New Bridge May Force Glass House Owner to Vacate," Aurora Beacon News. (September 11, 1967).

Speyer A. James. Mies van der Rohe. Chicago: The Art Institute of Chicago, 1968. pp. 10-11, 66-67.

2. Unpublished Sources:

Original blueprints and specifications for the Farnsworth House at:

The Office of Mies van der Rohe
111 East Wacker Drive
Chicago, Illinois

Miscellaneous Correspondence: Office of Mies van der Rohe:
Between contractors and Mies van der Rohe.
Between engineer, Feuter and Wolff, and Mies.
Between Dr. Farnsworth and Mies.
Between Dirk Lohan and Peter G. Palumbo and other
correspondence relating to 1971 sale of the house.

Cost information: At Office of Mies van der Rohe:
Estimate dated August 6, 1949.
Final Statement dated February 21, 1951.
Statement of Construction costs and payment thereon to
April 10, 1951.
Statement from Mies to Dr. Farnsworth dated May 16, 1951.

Draft of material written by A. James Speyer on Mies van der
Rohe for an exhibit put on by the Museum of Modern Art
June 26, 1952. At Office of Mies van der Rohe.

Interview with Myron Goldsmith, Partner, Skidmore, Owings and
Merrill. Mr. Goldsmith supervised construction of the
Farnsworth House while working in the Office of Mies van
der Rohe.

Legal Description of Farnsworth House (as of August 17, 1967)
located in Book 12 of Plats, p. 53; Document 156304. Other
plats of Survey are located in the Office of Mies van der
Rohe.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: The Farnsworth House is a small, rectangular steel and glass building, marked by structural purity. White painted steel, plate glass, travertine and prima vera wood have been used to create what is essentially a one-room house, set on a pedestal with an uninterrupted view of the surrounding countryside.
2. Condition of fabric: The house has just been restored.

B. Description of Exteriors:

1. Overall dimensions: Including the porch, the house is 28' 8" x 77' 3". Set off to one side is a lower terrace platform 55' 3" x 22' 8". Four feet from grade, the one-story building is 16' 1" from grade to the top of the roof slab and 10' 9" from the floor slab to the roof slab. The ceiling height is 9' 6".
2. Foundations: According to the original blueprints, the structural steel columns supporting the entire house are imbedded in concrete footings.

3. Wall construction: The walls are entirely of 1/4" polished plate glass set in metal frames between the structural steel columns and the facias at the floor and roof levels.

On the north and south sides of the house, each of four central glass panels is 11' wide and 9' 6" high. The four panels are flanked on each side by another panel 5' 6" wide and 9' 6" high.

On the west side of the house, a door is flanked by two 9' 6" high glass panels' one is 10' wide, one 11'. On the east side there are two windows that open. Above them is a glass panel 9' 6" wide and 7' high. Flanking each side of this central panel and the windows is a glass panel 9' 6" x 9' 6".

4. Framing, structural system: There are eight structural steel columns, set 22' on center, framing the glass curtain wall. Welded to these I beams are steel channel facias at the floor and roof levels. Behind the floor facias and supporting the floor are I beams set 5' 6" apart.

Mies did not like the texture of the structural steel next to the grinding marks, and so the entire steel frame was sandblasted down to a smooth, mat silver and painted white.

5. Porches and bulkheads: On the west side of the house, an extension of it, is a 22' x 28' 8" porch. Just after construction, the porch was screened in by Dr. Farnsworth. With the present restoration, the screening has been removed.

Set off to the west, on the south side of the house and porch is the 55' 33" x 22' 8" travertine terrace. It rests on six I beams, two of which support the house; the beams are set 22' on center. This terrace is 1' 3" thick, 1' 7" above grade, and 1' 1" lower than the bottom of the house. Four travertine stairs, 12' x 1' 2" with no risers, lead to the terrace. From the terrace to the porch are five more stairs, four the same size as those leading up to the terrace, one, 12' x 2' 6", leading to the porch.

6. Openings:

- a. Doorways and doors: There is one door on the west side, between the porch and the house. It is made by Kawneer of aluminum with 1/4" polished glass.
- b. Windows: All of the glass walls enclosing the house are fixed except for two small windows on the east side. These are each 4' 9" wide by 2' 6" high. The glass is 1/8" thick. Fasteners for the windows are bronze with a dull chrome finish. The windows, when unfastened, open in at a maximum angle of 30°.

7. Roof: The roof is a flat, 4-ply tar and gravel surface over 2" of foam insulation imbedded in asphalt. This is set over precast concrete resting on 13 I beams and a channel beam at each end.

C. Description of the Interior: The plan of the Farnsworth House is open. There is one vast space, with an interior core (approximately 24' x 2') containing a fireplace on the south side (facing the living area), a new kitchen on the north side and a bathroom at either end. Facing for the core is prima-vera wood.

Behind the fireplace, in the center, is a furnace room with a 2' 4" round utility stack in the center extending below grade. Located in the stack are electrical and telephone connections, to a septic tank and oil tank. The heat is primarily forced air, plus radiant heat throughout the entire floor area. There are exhaust fans for the kitchen and both baths, but the house was not designed with air conditioning.

D. General setting and orientation: The Farnsworth house is set 4' above a meadow north of the Fox River. Spring flooding is not unusual, so the house was constructed above the floor level.

Originally the house was secluded, located several hundred feet from roadways. In 1967, however, any real feeling of seclusion and privacy ended. The Milbrook Road was elevated and moved some 175' closer to the house and an 1884 bridge over the Fox River was replaced. Great controversy arose between Dr. Farnsworth and the Kendall County Board of Supervisors concerning the proposed changes. The Board won, and the new road was completed. Shortly thereafter Dr. Farnsworth put the house up for sale and gave up hope of using the house as a retirement home.

Prepared by: Susan S. Benjamin
National Park Service
June 15, 1974

Edited by: Eleni Silverman
Architectural Historian, HABS
July 1984

ADDENDUM TO:
EDITH FARNSWORTH HOUSE
14520 River Road
Plano vicinity
Kendall County
Illinois

HABS IL-1105
HABS ILL,47-PLAN.V,1-

REDUCED COPIES OF MEASURED DRAWINGS

FIELD RECORDS

HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
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Washington, DC 20240-0001

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Addendum to EDITH FARNSWORTH HOUSE

HABS No. IL-1105

NOTE: Existing Historic American Buildings Survey documentation of the Edith Farnsworth House includes ten photographs from 1971 and an eight-page historical report prepared in 1974.

Location: 1450 River Road, Plano, Kendall County, Illinois

Present Owner: National Trust for Historic Preservation

Present Use: Museum

Significance: Designed by International Style leader Ludwig Mies van der Rohe beginning in 1945-46, and constructed from 1949 to 1951, the Farnsworth House represents the apex of Mies' American career. Built as a country house for Edith Farnsworth, a single woman sympathetic to his aesthetic aims, the house comes as close as Mies ever came to achieving his vision of "beinahe nichts" or "almost nothing," the reduction of every element to its essence. In this, the Farnsworth House is the most succinct expression of the design philosophy Mies perfected in his American period; the creation of a legitimate modern architecture by fusing new industrial materials with enduring, universal principles of scale, proportion and balance. Mies' highly individual expression, codified by a generation of American students and admirers into a "style," came to dominate downtowns across the world in the second half of the twentieth century. The Farnsworth House, therefore, serves as a primer, a pellucid statement of the idea at the core of a global modern architectural movement.

Sited to address the Fox River that defines the southern edge of the property, the Farnsworth House's travertine stairs lead to a low terrace, with a second set leading to an upper terrace and the enclosed living space. Four pairs of steel columns suspend this glazed space above the ground. Within, a primavera-veneered core encloses bathroom and mechanical functions. Veneered, recessed from the ceiling, and set away from the building's edges, this core appears a piece of furniture rather than a wall, maintaining a sense of universal, continuous space. More temple than home, Mies set the house into an undeveloped rural landscape along the Fox River. Plug-welds render attachments invisible and transform the house into an object of Platonic perfection set into the rural landscape,

creating a powerful dichotomy between man and nature, between idea and reality. Far from a static object, the house's sliding horizontal planes reach out, engaging with their setting, while contrasting starkly with the organic shapes and rich colors of the prairie.

Years before its construction, sketches and models of the Farnsworth House garnered acclaim, inspired imitators, and horrified the self-appointed defenders of the traditional home. The house has continued to serve as an icon of the International Style, the perfection of modernist design ideals. Referenced, revered or reviled, the Farnsworth House is critical to an understanding of architectural design in the second half of the twentieth century.

PART I: HISTORICAL INFORMATION

A. Physical History:

- 1. Date of erection:** Architect Ludwig Mies van der Rohe began designing the house in late 1945 or early 1946. Construction began in September 1949 and ended in 1951. Owners subsequently added several other structures to the property, but a lack of documentation means that their construction dates are uncertain. Edith Farnsworth likely built the wood-framed garage around 1951, the year of initial occupancy. Lord Palumbo added a boathouse, swimming pool, tennis court, sculpture garden, and a short footbridge while he enjoyed the house as a private estate (1972-1997) and built the visitors' center and a second, longer bridge in order to open the site to tourists in 1997. When the National Trust for Historic Preservation and Landmarks Preservation Council of Illinois (now Landmarks Illinois) took over the site in 2003, they renovated the visitor's center, replaced the short foot bridge and made minor changes and repairs to the house and site.

- 2. Architect:** The office of Ludwig Mies van der Rohe, Chicago, Illinois.
German-born Ludwig Mies van der Rohe (1886-1969) was fundamental to the twentieth century development of an architectural expression for the modern age. Recognized, with Le Corbusier and Walter Gropius, as a founder of the "International Style," Mies' career evidenced a continual refinement of some fundamental concepts, including; a reduction of parts; an expression of materials; and plans that balanced symmetry with freedom. His work continually strove to achieve the ideal of "beinahe nichts," or almost nothing, the search for meaning in the barest of essentials. Beginning his career in Germany, Mies rose to professional prominence through works like the soaring glass shaft he designed for the 1921 Friedrichstrasse Office Building competition, as well as the honed and polished, seemingly expanding German Pavilion he built for the 1929 Barcelona International Exposition.

Despite being devotedly apolitical, Mies' aesthetic progressivism made it impossible for him to continue practicing in Germany as the Nazis ascended to power in the 1930's. In 1938, Mies moved to Chicago to serve as director of the architecture school at the newly-expanded Illinois Institute of Technology (IIT). His first commission was a new campus for the school,

and in this work, Mies developed a new vocabulary to address his fundamental concepts of reduction, materiality and plan. Rather than using highly finished masonry to bring mass to his compositions, Mies began exploring the steel and brick of the industrial age, and the Farnsworth House represents one of his earliest and most carefully detailed examples of this new interest. It was these materials that he used to develop his most influential typology; the glass and steel tall building. Structures like Mies' 860-880 Lake Shore Drive and the Seagram Building became powerful precedents, and similarly detailed skyscrapers, by Mies and others, began to appear across the world, the embodiment of rationality and modernity, the search for poetry in simplicity.

3. Consulting/supervising architects/engineers:

1946—Myron Goldsmith, Structural Engineer

Born in Chicago in 1918, Goldsmith was a student at IIT when Mies became director of the school. Trained as both an architect and an engineer, in 1946, Goldsmith joined the Office of Ludwig Mies van der Rohe, where he served as designer and structural engineer for the Farnsworth House. In 1953, he received a Fulbright Grant to study structural design with Pier Luigi Nervi at the University of Rome. Upon Goldsmith's return to Chicago in 1955, he spent the next 28 years in the Chicago and San Francisco offices of Skidmore, Owings and Merrill, designing structurally-expressive, innovative buildings, including the United Airlines Maintenance and Wash Hangars at San Francisco International Airport (1958), the Robert R. McMath Solar Telescope at Kitt Peak National Observatory in Arizona (1962), Oakland Alameda County Coliseum in Oakland, California (1966), and the Republic Newspaper Plant of Columbus, Indiana (1971).¹

In addition to designing buildings that brought *fermitas*, *utilitas*, and *venuitas* into uncommon alignment, from 1961 until his death in 1996, Goldsmith served as a thesis advisor to graduate students at the architecture school at IIT. On an advising team with David Sharpe and Fazlur Kahn (later, Mahjoub Elnimeiri and Ahmad Abdelrazaq), Goldsmith worked with more than 280 students to develop detailed designs that laid the basis for new structural systems; created new approaches to super tall structures; and explored the structural implications of high-rise, mixed-use buildings.² Through his design work and his contributions to IIT's graduate program, for more than three decades Goldsmith played a critical role in the advancement of the field of structural design.

1972—Lanning Roper, Landscape Architect

Lanning Roper was born in 1912 to a New Jersey investment banking family.³ He attended Harvard and served in the U.S. Navy during World War Two. Military service brought him to England, and Roper's native genius for landscape design found inspiration in the British

¹ For more information on Goldsmith's career, see Werner Blaser, ed., *Myron Goldsmith: Buildings and Concepts* (New York: Rizzoli, 1987).

² Goldsmith's academic contributions are detailed in Edward Windhorst, *High-Rise and Long-Span Research at Illinois Institute of Technology: the Legacy of Myron Goldsmith and David C. Sharpe* (Chicago IL: Illinois Institute of Technology, 2010).

³ Jane Brown, *Lanning Roper and his Gardens* (New York: Rizzoli, 1987), 15.

climate and garden tradition. He trained at Kew Gardens and at the Royal Botanical Gardens in Edinburgh, and in 1951 he became an assistant to the editor of the various publications of the Royal Horticultural Society. From this position, Roper gained prominence as a garden expert in Britain. In the mid-1950's, publication of the design of the garden at Park House, the London home he shared with his artist wife Primrose, proved he had creativity and sensitivity to the English landscape garden. For the next thirty years, Roper designed gardens at historic estates, universities, corporate campuses and at new homes in Britain, Ireland, continental Europe, and the United States. His prestigious client list included the British National Trust, Lord Snowden, Aga Kahn and Prince Charles. Roper's greatest success came as a conservator of historic gardens, maintaining the overall design of existing gardens, while shifting aspects to meet modern needs and budgets. His *Sunday Times Gardening Book* (1968) remains a fundamental text in twentieth-century gardening.

1972—Dirk Lohan of the office of Mies van der Rohe

Son of Mies' daughter Marianne and her husband Wolfgang Lohan, Dirk Lohan was born in Germany in 1938, the climactic year the Anschluss and the Sudeten Crisis made war an increasingly inevitable outcome of the Nazi regime. In the same year, his grandfather Mies took up a teaching position at Chicago's IIT. Lohan grew up amidst the physical and economic cataclysms of World War Two and its aftermath. In his late teens, he spent a year at IIT under his grandfather's direction, but returned to complete his schooling at the Technical University of Munich. In 1962, he relocated to Chicago permanently, working in the Office of Mies van der Rohe. He became one of the lead designers in the firm following Mies' death and has subsequently served as principal in a series of Chicago architecture firms.⁴ Rejecting the postmodernism of the 1980s (which has often been cited as a reaction to Mies' ahistorical rationalism), Lohan's buildings, which include the McDonald's corporate campus in Oak Brook and the addition to the Shedd Aquarium, have developed upon the principles that guided his grandfather's work, creating timeless and appropriate solutions to building problems.

2003—Antunovich Associates, Inc., Architect.

4. Original and subsequent owners:

1951-1971	Edith Farnsworth
1971-2003	Lord Peter Palumbo
2003-present	National Trust for Historic Preservation

5. Original and subsequent uses:

1951- 1997	private residence
1997 – 2003	private residence and museum
2003 - present	museum

⁴ For more information on Lohan, please see Dirk Lohan and Cheryl Kent, *Dirk Lohan: Buildings and Projects of Lohan Associates 1978-1993* (Berlin: Wasmuth, 1993).

6. Contractors: Architect Mies served as construction manager for the house, and hired workers directly. Their names have not been well-documented. Karl Freund served as cabinetmaker for the interior woodwork.

7. Original plans and construction:

The history of the Farnsworth House began several years before its construction. Ludwig Mies van der Rohe and Dr. Edith Farnsworth met socially sometime in the winter of 1945-1946 and she proposed that a student of his might be interested in drawing up plans for her vacation house. Mies offered to take on the commission on himself, and design began soon after. In 1947, a preliminary model of the house appeared in a Mies exhibition at the Museum of Modern Art in New York (MoMA).⁵ Construction finally began in 1949, and Farnsworth took occupancy in 1951.

Mies sat near Farnsworth at that fateful dinner party, but one suspects some social machinations cleared the way for their coincidental meeting. Farnsworth owned nine acres along the Fox River, fifty miles southwest of Chicago; a property defined by Fox River Road (now River Road) on the north; Plano-Millbrook Road (now Fox River Drive) on the west; the Fox River on the south; and a straight plot line along the eastern boundary. Interested in building a country house on this land, Farnsworth had solicited architectural recommendations from MoMA, certainly an aesthetically ambitious approach to the design of a small rural retreat.⁶ The museum suggested Le Corbusier, Frank Lloyd Wright and Mies. Living in France, Le Corbusier likely appeared beyond practical reach. Wright, who had finished Fallingwater eleven years earlier, still summered at Taliesin in Spring Green, Wisconsin, only a day's drive from Chicago. Moreover, Wright was currently absorbed in his Usonian houses – which used a standard vocabulary of materials and elements to simplify design and achieve middle-class affordability, certainly a sound approach to a country house. A transplanted German with limited English, Mies had built little in the United States up until that point, engaged primarily in the direction of the architecture school at IIT, and the design of their new campus. The fact that Mies lay within her social realm certainly influenced her judgment, but approaching Mies rather than Wright also suggests that Farnsworth consciously desired a unique, progressive work of art, rather than a convenient, cozy product of Wright's larger Usonian system.⁷

⁵ Arthur Drexler, *The Mies van der Rohe Archive* (New York: Garland Publishing, 1986). Volume 13 of 20 contains hand sketches and drafted drawings that communicate Mies' design process at the Farnsworth House, illustrating options explored and details developed over time.

⁶ Franz Schulze, *Mies van der Rohe: A Critical Biography* (Chicago: University of Chicago Press, 1985), 252.

⁷ Although a well-educated woman and an accomplished musician, Farnsworth's letter to MoMA suggests an interest in modernism and architecture that she had not demonstrated earlier in her life. Current events had likely stirred her interest in the subject. It is believed that Farnsworth worked at Michael Reese Hospital at this time, located just a mile from the IIT campus, so she likely would have been aware of the nearby construction of their campus. In addition, in 1945, Michael Reese Hospital hired the recently-formed, Boston-based The Architects' Collaborative (TAC) to undertake a major master plan to their campus. Headed by Walter Gropius, founder of the

Mies was likely intrigued by Farnsworth's intelligence and her openness to his aesthetic aims, but also by the freedom of design and short timeline promised by such a small project. Work at IIT proceeded slowly, and his new steel vocabulary had inspired many ideas that were infeasible at the campus. In a small home, there would be no need for the fireproofing redundancies employed at the school, allowing Mies to fully fuse structure and design. With simple programmatic needs, the plan also approached Mies' ideal of "beinahe nichts," or "almost nothing." In Farnsworth's commission, Mies saw an opportunity to develop his recent material and spatial considerations in a more succinct, direct, and timely manner.

When one looks at Nature through the glass walls of the Farnsworth House it takes on a deeper significance than when one stands outside. More of Nature is thus expressed – it becomes part of a greater whole.⁸

Thus the architect and client began a working relationship that soon developed into something more. Farnsworth needed an expected inheritance to fund the construction, so she did not rush Mies to construction and he spent more than two years lingering over the house's details. His

Bauhaus, former Mies co-worker, and head of the architecture department at Harvard, as a firm TAC sought to emphasize public service and a collaborative approach to design. Michael Reese hired the innovative firm to reconsider the approach to the patient, as well as the institution's relationship with its setting. Starting with the existing, Prairie Style multi-story hospital (1907, Schmidt, Garden & Martin), TAC expanded the site to the north and south. TAC sited and designed industrial buildings like the laundry and power plant to the north. To the south of the Schmidt, Garden & Martin building, Gropius designed a series of low-rise care facilities in a lush landscape, meant to offer patients tranquil space to contemplate and wander. Not only did the plan bring patients into closer contact with nature, but also it broke down the growing boundaries between the hospital campus and the adjacent neighborhood. Residential buildings east and west of the site engaged residents and provided employees with nearby places to live. It is not known if Farnsworth was involved with the planning effort, but the work must have been well-known and frequently discussed amongst the staff. Licensed in Massachusetts, Gropius needed an architect with an Illinois license to submit the drawings and assist in design, and he suggested hiring Mies in this capacity. Mies proved too busy at IIT, but his name was associated with the project in the earliest stages, and might have been brought to Farnsworth's attention.

Farnsworth's house and the campus grew up concurrently. TAC planned the campus from 1945 until 1947, when it was featured in a Philip Johnson exhibition at MoMA, "Two Cities: Planning in North and South America." A model of Farnsworth's house appeared in the 1947 MoMA retrospective of Mies' work. The first of Gropius' new structures, the Kaplan Pavilion, began construction in 1950, just after Farnsworth's house broke ground, and was finished in 1955. With the evolution of her workplace, and her choice of a modern retreat house, Farnsworth's personal landscape was hurtling into the future in this period. Subsequent events have caused historians to characterize Farnsworth as an architectural innocent, unaware of the realities of modern design, but she stood at the forefront of International Style at the time, and embraced the approach when given the opportunity to issue her own commission.

Regrettably under-studied, the Michael Reese Campus was closed by the city in 2008 and Chicago's 2016 Olympic bid proposed demolishing the campus and constructing a new Olympic Village on the site. As it faced demolition, preservationist Graham Balkany researched the history of the site and led a campaign to adaptively reuse the complex. Little has been published on the history of the site, so this information comes from the website "Gropius in Chicago Coalition: The Campaign to Save Michael Reese Hospital; The Legacy" http://www.savemrh.com/mrh_arch/.

⁸ Mies van der Rohe to Christian Norberg-Schulz, "Ein Gespräch mit Mies van der Rohe," *Baukunst und Werkform* 11/11 (Nov. 1958): 615, quoted in Wolf Tegethoff, *Mies van der Rohe: The Villas and Country Houses* (Boston: The MIT Press, 1985), 130.

office finally began producing construction documents in fall 1949, refining the design considerably in the final months.⁹ Family and friends of both Mies and Farnsworth recall languid picnics on the site, shared dinners, and her frequent visits to the studio. Much speculation has occurred regarding the nature of the friendship between Farnsworth and Mies, but there is little sure evidence beyond common recollections of her considerable respect and his enthusiasm for the design. A physical relationship is likely, if somewhat speculative, but the intensity of their later falling-out suggests that an emotional bond had developed between the two in the five years they spent designing and building her home.

Broad study of the site revealed the river as its chief attraction, and Mies identified a large black sugar maple near the shore as an element of secondary importance. In siting the house, Mies made the river the primary viewshed, arranging the long side of the rectangular house parallel to the shore, with the living space facing the river to the south and the kitchen looking north to the distant road. The maple tree became a kind of anchor for the house. Located a few feet from the corner formed by the house and the lower terrace, the tree provides needed shade for the fenestrated building, while its great, rough trunk also serves as a foil for the structure's machined regularity.¹⁰ The site boundaries changed over time, but originally the house sat to the south of the site, along the river, and just east of center, amidst a natural prairie intermingling with the black sugar maple and the other trees of the riparian zone.¹¹

Farnsworth offered Mies little design direction, trusting her friend's vision, respecting his depth of consideration. Although normally slow to develop a design solution, sketches suggest Mies produced the basic design of the project rapidly, establishing the general scheme for the house by summer 1946. An elevated, glazed open living space with a central core, accessed from a lower terrace, appeared in sketches quickly and remained constant, but Mies spent several years perfecting and adjusting the details. He played with the ordering grid; shifted the core's width, depth and position within the house; and considered a second stair at the north facade. A model of the house was included in the 1947 retrospective exhibition of his work at MoMA. Farnsworth was known to have specifically requested only a few items; the screens at the upper terrace and a full-height wardrobe to hang dresses, rather than the waist-high bureau Mies initially proposed (which would have preserved eastern views from the living room area).

Mies' vision for the house extended to each detail. Not content to merely issue drawings, he served as the general contractor, hiring subcontractors, working with them to develop the drawn details into built form, and sending his draftsmen out to supervise the work on the site. More than simple construction workers, the men who worked on this house served as craftsmen, shaping and perfecting each visible plane and surface. The central contradiction of the Farnsworth House is the painstaking level of handiwork required to achieve its appearance of machined, honed perfection. Steel members were sand-blasted smooth prior to installation,

⁹ Phyllis Lambert, "Space and Structure," in Phyllis Lambert ed., *Mies in America* (Montreal: Canadian Centre for Architecture, 2001), 340.

¹⁰ In 2010, the black sugar maple has exceeded its lifespan, and the owner is currently considering its removal and replacement.

¹¹ Martiz Vandenburg, *Farnsworth House: Ludwig Mies van der Rohe*, (London: Phaidon Press, 2003), 17.

and welded joints were sanded to eliminate the appearance of seams or obvious attachments. Coats of thick white paint further concealed the rough nature of the steel, and polished plate glass spanned between these perfected steel members. Erasing the realities of manufacture and connection transformed the house into pure idea, more spirit than body. Construction began in late 1949 and Farnsworth took possession in spring 1951.¹²

Mies' careful attention, along with the prolonged design process and increased material costs caused by the Korean War, meant that the price of the house quickly exceeded estimates. Initially set at \$30,000 and increased to \$40,000 early in design, by 1952 Farnsworth claimed to have paid over \$70,000 for her vacation house, a phenomenal price at a time when the average new single-family house cost \$8,450. Beginning in 1950, Farnsworth raised concerns about the cost and she felt Mies failed to respond appropriately.¹³ In her autobiography, Farnsworth mentions that she became concerned that the inexperience of Mies' on-site staff was driving up construction costs. When she brought this concern to Mies, he responded "(y)ou go back to your nephritis where you belong and leave me to build your house without interference."¹⁴ The two avoided a conflict on that occasion, but tension mounted. Observers and later scholars have suggested that a sense of personal abandonment, more than cost overruns, fueled Farnsworth's upset, since as the project neared completion and other work came into his office, Mies directed his interest elsewhere and it became clear that their close friendship would not continue beyond the home's occupation.¹⁵ The rising price of the house, and the architect's apparent indifference to his client's concern, however, certainly played a part in the rift.

In 1952, Farnsworth refused to pay final costs; Mies sued for the sum and she countersued, alleging incompetence. The consequent court case proved damaging for both parties. As the design began several years before construction, parts of their agreement were implied, rather than clearly written, giving Farnsworth some basis for a claim. In her case, however, Farnsworth made a number of disingenuous statements that weakened her position. She said that a \$40,000 budget was the final approved cost, and claimed Mies knew the project would cost more but deceived her until construction was well underway in order to trap her into continuing. Her lawyer pressed Mies hard in his testimony, inquiring into technical details in an effort to prove his claim of incompetence. In his countersuit, Mies provided documentation that Farnsworth signed a \$61,300 estimate in August 1949 and that she subsequently approved additional costs. Mies proved his licensure in the state of Illinois, and several architects

¹² Master's Report to the Honorable Judges of the Circuit Court of Kendall County Illinois, in Chancery Sitting: Ludwig Mies van der Rohe, Plaintiff vs. Edith B. Farnsworth, Defendant, Gen. No. 9352 In Equity, 7 May 1953, 3.

¹³ Ibid., 6.

¹⁴ Edith Farnsworth Papers, Midwest Manuscript Collection, The Newberry Library, Chicago. Box 2, Folder 29 contains Farnsworth's Memoirs, Chapter 13. Please note, pages are not numbered, so references will include chapter only.

¹⁵ Farnsworth later claimed "Perhaps as a man he is not the clairvoyant primitive that I thought he was, but simply colder and more cruel than anybody I have ever known. Perhaps it was never a friend and a collaborator, so to speak, that he wanted, but a dupe and a victim." For his part, Mies said of Farnsworth, "the lady expected the architect to go along with the house." Farnsworth quote from Memoir, Chapter 13. Mies quoted in editor's reply to letter of Mary Z. Valatka, *Newsweek*, 29 Sep. 1969. Both quoted in Schulze, *A Critical Biography*, 253.

testified that, more than merely competent, he was a leader in the field. In the end, the court found for Mies, but awarded him \$14,000, rather than the \$28,173 he claimed, and the pair eventually settled for a much lower sum. The finding was a rebuke for Farnsworth, and the process of proving his competence after forty years of practice was embarrassing for Mies. The lawsuit was an ignominious end to a friendship that had birthed an object of transcendent beauty. The court case proved a loss for both parties and also drew broad attention to the remote, private building. Local newspapers and national magazines printed articles on the lawsuit, bringing attention to the house, but also tainting it with scandal.

8. Alterations and additions:

Main House

Despite the financial and emotional difficulties associated with construction, Farnsworth took full possession of her new house. Mies had discussed designing furniture and ordered some of his pieces for her, but his schedule, the rising construction costs, and their strained relationship kept the furniture from realization. Instead, Farnsworth furnished the home herself. Living in the house did present her with unique challenges, and Farnsworth spoke and wrote of the embarrassments of snoring overnight guests in a house without walls, and complained about stepping out of the bathroom to find trespassing tourists snapping photos outside her window.¹⁶ Neighboring farmers remember boating down to check on, and sometimes rescue Farnsworth when the river rose in the night.

Despite these practical difficulties, Farnsworth made few changes and remained committed to her house, free in her praise of its artistry.¹⁷ As a new structure, the house required few repairs in the two decades Farnsworth occupied it. She added full-height screens to the upper level terrace (part of the 1947 design, but not installed until after final completion) and replaced the original curtains with bamboo roll-up shades in 1954 after flood waters entered the house, staining the original curtains.¹⁸

Farnsworth used the house as a regular weekend retreat for nearly two decades, and in 1961 she purchased the fifty-four acres east of her site, further investing in the house and its grounds. She also doggedly opposed a road relocation plan that significantly altered the experience of her transparent home. Sited in the middle of the original nine-acre parcel, the house was relatively isolated, with just a glimpse of a narrow bridge across the Fox River to the west. In 1960 Kendall County proposed the construction of a new, higher-speed bridge east of the current one, within easy sight of Farnsworth's house. Mies' design depended upon acreage to afford the privacy normally afforded by walls. The new road would make the house

¹⁶ Farnsworth Memoir, Chapter 13.

¹⁷ Letter, Philip Johnson to Mies van der Rohe 4 Jun. 1951. Held in the Ludwig Mies van der Rohe Archive, Architecture and Design Study Center, Museum of Modern Art, New York.

¹⁸ Mies designed a track for the screens, but they were not installed until after final completion. Historians have suggested that Mies disapproved of the screens, but provided the track at Farnsworth's insistence. The fact that the screens appear in the 1947 Museum of Modern Art model casts doubt on this conclusion, and suggest rather, that the screens were always intended, just fabricated and installed after occupancy. Some historical accounts suggest Farnsworth never purchased the original curtains, but photographic evidence proves that there were curtains in the house originally, and bamboo shades appeared later, after the 1954 flood.

easily visible, and would bring headlights and traffic noise into the building. Farnsworth fought the plan for seven years, legally opposing an order of eminent domain, but the courtroom again disappointed her, and the county opened the new bridge in 1967. The road project took almost two acres of Farnsworth's original nine, and inescapably exposed her house to traffic.

Soon after the new bridge was constructed, sixty-four year old Farnsworth retired to Italy, where she had studied violin in her youth. Taking up residence near Florence, she began translating Italian poetry, publishing works by Albino Pierro, Salvatore Quasimodo and Eugenio Montale (who became a close friend before she died in 1977).¹⁹ In 1971, several years after she moved, Farnsworth finalized the sale of her weekend house to Peter Palumbo, a wealthy British developer with an avid appreciation for modern architecture. In 1962, Palumbo commissioned a skyscraper design from Mies, and subsequently discussed adding his own vacation house to the invoice.²⁰ In his seventies at the time, Mies' physical strength was waning. His grandson, Dirk Lohan, suggested Farnsworth's house might be available, and Palumbo approached Farnsworth with an offer and eventually purchased her home.²¹

Inheriting a twenty year old house, Palumbo replaced the roof when he took possession, slightly (imperceptibly from the ground) altering the roof detail. He also had the entire steel frame sand blasted and recoated with a *Tnemec* paint treatment.²² Palumbo removed the exterior screens and added new curtains, changes intended to bring the house more in line with Mies' original design intent (as Palumbo interpreted it). He also hired Dirk Lohan, Mies' grandson and partner in the Office of Mies van der Rohe, to undertake minor interior changes. Lohan added a hearthstone to improve the functionality of the fireplace, designed a few pieces of furniture, and replaced the mechanical systems in their entirety.²³ Air conditioning and a

¹⁹ Farnsworth Memoir, Chapter 13.

²⁰ Palumbo commissioned the skyscraper design in 1962, although the lease on the land would not expire until 1986. Seventy-six years old in 1962, it was understood that the building would be constructed after Mies' death, an opportunity for him to exert a posthumous influence. By 1986, however, tastes had changed. Mies' project, adjacent to works by George Dance the Elder, Edwin Lutyens, Christopher Wren, and John Vanbrugh, was rejected by Britain's Environmental Minister, who considered the work "unsympathetic" to the historic locale. Palumbo currently owns Frank Lloyd Wright's Usonian Kentuck Knob (I. N. Hagen House) in Chalk Hill, PA, and he relocated much of the outdoor sculpture from the Farnsworth House to this new site in 2003.

²¹ Franz Schulze, *The Farnsworth House* (Self-Published by Peter G. Palumbo, 1997), 22.

²² Vandenburg, 25. Vandenberg states that Palumbo replaced all the plate glass in 1972 as well, but color and surface variations between the panes make it obvious that the windows are currently a mixture of original polished plate glass and later tempered panes, suggesting they were replaced as they cracked or broke, rather than as part of a unified campaign. People involved with the original construction have noted that the *Tnemec* coating is much thinner than the original, multi-coat paint. Consequently, flaws in the steel that are currently detectable would originally have been imperceptible.

²³ Joseph Fujikawa, Bruno Conterator and Lohan operated the Office of Mies van der Rohe from his death in 1969 until 1975, when they changed the name to Fujikawa, Conterato, Lohan Associates. In 1982, the firm changed its name to FCL Associates and Fujikawa left to start Fujikawa and Johnson Associates Inc., with Gerald Johnson. From 1986 until 2001, the firm was called Lohan Associates, and in 2001 it became Lohan Caprile Goettsch Associates. In 2004, Lohan left Lohan Caprile Goettsch to found Lohan Anderson, with Floyd D. Anderson and in 2010 he continues to practice with this firm. In 2005, Lohan Caprile Goettsch renamed itself Goettsch Partners, and considers itself the successor firm to the Office of Mies van der Rohe.

dehumidification system were installed to deal with the house's lack of ventilation, as well as the condensation problems inherent to a glass-enclosed structure in a temperate climate.

In 2003, after thirty-two years of ownership, Palumbo placed the house on auction and the National Trust for Historic Preservation and the Landmarks Preservation Council of Illinois won the bidding and purchased the Farnsworth House. By their initial agreement, the National Trust took ownership, while the Landmarks Council managed the site. When the pair of non-profits took possession in 2003, they hired Antunovich Associates to tie the cantilevered stairs leading from the ground to the lower terrace into a concrete slab foundation in order to strengthen them for the heavier load associated with the museum occupancy, but made no other alterations to the house itself. In 2010, the Landmarks Preservation Council (now known as Landmarks Illinois), handed management of the site over to the National Trust.

More so than intentional alterations, regional development and climatic changes have significantly impacted the house by altering its relationship with its site. In addition to visually isolating the house as an object, Mies' decision to raise the building placed it more than a foot above the highest known flood level (established in consultation with local officials and long-term residents). Since that time, however, development in the Fox River valley has increased the impermeable surfaces of the region. A larger amount of water runs directly into waterways without soaking into the ground first, increasing the rainfall runoff throughout the valley. This, in conjunction with recent extreme weather events, means that the river now rises higher, faster and more frequently than it did historically, and it is this flooding that has had the greatest impact on the history of the Farnsworth House, and poses the most intractable preservation problem.

In 1954, just three years after Farnsworth moved in, a spring flood brought at least two feet of water into the building.²⁴ Since the essential elements of the house are steel, glass and stone, the structure seemed largely impervious. This initial flood damaged furniture, curtains and rugs, but did not severely stain the wood core. Evidence suggests water entered the house on other occasions between 1954 and 1971, when Palumbo took possession. There were a few high-water incidents early in his ownership, and then during great flood of 1996 more than five feet of water inundated the house, and stood for some time. One pane of glass along the south façade was shattered.²⁵ The primavera core, the bathroom doors, the metal kitchen cabinets and the freestanding teak wardrobe were sodden, destroying the wood finish, warping the veneer and speeding rust on the metal. Palumbo undertook an extensive (but under-documented) repair campaign, which included; rebuilding the primavera core and replacing sections of the core with removable primavera panels; nearly reconstructing the wardrobe; and replacing the bathroom doors. A 1997 flood brought a few inches of water into the house, causing little damage but suggesting that the 1996 event was no thousand-year aberration. In 2008, a foot and a half of water rose in the building, moderately staining the restored core and

²⁴ Vandenburg, 26 claims it was at least four feet of water, but other sources state less than two feet of water flooded the house in 1954.

²⁵ There is debate about the cause of this breakage. The wardrobe was found upended, adjacent to the crack, suggesting furniture impact caused the failure. The shards of glass, however, primarily appeared on the interior, conversely suggesting the glass failed under exterior water pressure.

the wardrobe. Water leaked into the hollow-core bathroom doors, staining the bottom of both doors. There is concern that over the course of multiple floods, water has leaked into the window frame and floor beam assembly, rusting the steel elements from within, perhaps causing the oxide jacking problem at the southwest corner of the house and the increasingly rapid failure of the *Tnemec* coating at the lower sills. Those conditions are under investigation in 2010.

Beyond flood damage, other deterioration has altered the structure as well, but has not yet been repaired. Over time, calcium-rich run-off from the travertine terraces has clogged the built-in drains, trapping water on the upper and lower terraces and soaking the stone, with consequent cracking due to freeze/thaw cycles. The travertine stairs are less susceptible to dampness, but an improper reinstallation during Palumbo's tenure damaged several stones, and a portion of a tread in the stair from the lower to upper terrace cracked off and has been temporarily replaced with plywood. On the interior, sunlight continually bleaches the primavera veneer of the core, darkening it gradually. The humidity level within the house fluctuates widely; dry winter conditions cause the wood to crack, while humid summers swell the paneling, wardrobe, and bathroom doors.

Site

Beyond the house itself, several buildings and structures have been added to the site. Evidence suggests that Mies gave some thought to the design of the landscape, but the legal troubles kept that work from development or fruition. During Farnsworth's tenure, the house simply stood amongst natural prairie grasses. Early in her occupancy, Farnsworth built a short driveway from Fox River Road (now River Road), leading to a frame garage on the ridge above the house. Visitors typically drove beyond the garage, down the unpaved construction road, and parked just east of the house. In 1961, Farnsworth expanded her nine acre site by purchasing the fifty-five acres to the east. In 1967, after seven years of objections and a lawsuit from Farnsworth, the county forcibly acquired the western portion of her site to reroute Plano-Millbrook Road (now Fox River Drive). Rather than slightly east of center, the house now stood close to the western edge of the property. Farnsworth lost two acres through the road construction, but with the addition of the site to the east, in 1968 her property included sixty-two acres.

After purchasing the property from Farnsworth in 1971, Palumbo restored the house carefully, but did not feel constrained by Mies' siting of his machined object within the untamed prairie. In 1966, Palumbo had hired Lanning Roper, a leading landscape architect in Britain, to work at Buckhorst Park, Ascot, his country estate. Palumbo also involved Roper in the design of several urban pocket parts and the main plaza at his Mansion House square development (in which Mies' skyscraper was to be the centerpiece). In the winter of 1973, Palumbo and Roper visited the Farnsworth House and began to lay out a path and parking lot near the site, beginning what would become a decade-long collaboration. Roper came to the house for at least two weeks a year to design and tend to this creation. Together, Palumbo and Roper transformed the site to accommodate Palumbo's needs and desires, to create his own ideal country estate. They built a new driveway 650 feet east of Farnsworth's, ending it in a small parking area at a discreet distance from the house. A new arched wooden footbridge bridged

a small stream between the parking and the house. Trees were planted to the east and west of the house, in an attempt to screen it from the new bridge and road on the west, and to allow the structure to be gradually revealed to visitors approaching from the new parking area on the east. The tall grasses of the meadow were replaced with a high-mown lawn seeded with daffodils. Spectacularly, Palumbo brought his modern outdoor sculpture collection to the site, setting the house amidst works by renowned modern artists.²⁶ This sculpture, selected and sited by Palumbo, brought an air of extreme aesthetic cultivation to the rural site, enhancing the sense of the house as an art object for contemplation as much as use, the largest of the site's many sculptures. Farnsworth's house had been set into a natural meadow.²⁷ Roper's work tamed the site, in some ways making it akin to the suburban houses that have slowly spread outward from Chicago toward Plano in the years since the house's construction.

In addition to transforming the native, rough landscape into a controlled garden, Palumbo added a boathouse, pool and tennis court to the site. Adjacent to the road and atop the ridge that rises north from the house, the tennis court is largely invisible from the house and its meadow. The swimming pool lies directly north of the house, west of the garage. Surrounding the pool itself, slate deck tiles are laid atop concrete strip footings, with narrow reveals between the joints. A low curving, concave berm blocks views of the pool from the road, and provides a perfectly arranged seat for a sunbather gazing down the meadow to the house and the river beyond. The pool's aluminum ladders are removable, and the filtration and chlorination equipment are located in the garage, so the swimming pool is nearly invisible from the house as well. To support his new recreational facilities, Palumbo added a toilet, shower and sauna on to the rear of the garage, with a stand of trees shielding it from the house below.

While the pool and tennis court retreat from the house's viewshed, Palumbo's boathouse was built within yards of the structure, necessarily along the river. Designed and skillfully detailed by an unknown architect, the boathouse is primarily a simple shingle gabled roof, set over burrowed concrete retaining walls, with concrete stairs leading down to a small dock area and a narrow channel to the river. Although a small structure, the careful, innovative joinery elevates the boathouse to a quality above simple building, making it clear that Palumbo understood it as architecture, with its high-quality, definitively expressed detailing offering a contextual and engaging response to its eminent and visibly jointless neighbor.

In 1997, Palumbo opened the house and grounds to visitors, and created a visitor core on the east end of the property. This included a third driveway, leading to a graveled parking lot. He purchased a prefabricated metal building to temporarily serve as the visitor center and offices, and sited it on the west end of a new parking lot. A new, 45-foot long bridge was built to span

²⁶ As a private collection, Palumbo's works on the site changed at his will and without record, but a visitor's guide, likely from the late 1990s diagrams a collection that included a site-specific commission by Andy Goldsworthy honoring the 1954 flood, a site-specific commission by Michael Warren, works by Wendy Taylor, Jim Dine, Peter Hide, George Rickey, Harry Bertola, Sir Anthony Caro, Ellsworth Kelly, Katherine Gillis, Phillip King and Allen Jones, along with two British call boxes, a fragment of the Berlin Wall, and a cupola from the 1872 N. 1 Poultry Building in London, the building which Palumbo commissioned Mies to replace.

²⁷ There are no sketches of landscape on the site, beyond the black sugar maple near the house, and no evidence that Mies began any kind of landscape design for the commission.

the Rob Roy Creek and connect the visitor area to the historic core of the site. In 2003, when the National Trust and Landmarks Illinois took control of the site, they altered the interior of the visitor center, made repairs to the bridge and strengthened the steps at the house itself.

B. Historical Context

Client Edith Farnsworth

The story of the Farnsworth House began at that Chicago dinner party, when a successful woman looking for a place of respite met a restless, single-minded designer emerging from a period of enforced inactivity. Client Edith Farnsworth, born in 1903, was the daughter of a wealthy lumber manufacturer. She studied English Literature at the University of Chicago and trained as a violinist at the American Conservatory of Music, and with tutors in Rome. Unusually accomplished for a woman of her time, in 1939 Farnsworth took a degree in medicine at Northwestern University, specializing in nephrology. Unmarried, and in her early forties when she met Ludwig Mies van der Rohe, Farnsworth was successful, but also strained by the pressures of her job and dissatisfied with her social life.²⁸ She had recently purchased a piece of property along the Fox River, about sixty miles southwest of Chicago, and was considering constructing a weekend retreat. A musician, Farnsworth had a deep appreciation for the arts, and as a single woman, she longed to create a residence that reflected her individual needs, distinct from the ill-fitting nuclear-family model that dominated not only residential design, but also so much of her daily life. She believed “there must be a really fine solution for an inexpensive weekend retreat for a single person of my tastes and pre-occupations.”²⁹

Ludwig Mies van der Rohe

Early Years and Influences

At that dinner party, Farnsworth was seated near Mies, a towering figure in the design world, but virtually unknown to the general American public. In 1886, Maria Ludwig Mies was born in Aachen, Germany, the youngest of five children in a successful stonemason’s family. Educated at the local cathedral school, Mies spent his childhood working in his father’s yard, learning the details of stonework. He also recalled admiring the medieval stonework of Charlemagne’s Palatine chapel while attending Mass with his mother, in his later years citing that building as a significant influence.

At the age of nineteen, Mies’ ambition drove him to seek the expanded opportunities offered in Berlin, capitol of the newly united Germany. He secured a draftsman’s position in Peter Behrens’ studio, where he famously, if only tangentially, worked alongside Walter Gropius

²⁸ Farnsworth Memoir, Chapter 3. She memorably complained about boring Sunday afternoons, with the Metropolitan Opera radio broadcast as the only source of distraction.

²⁹ Farnsworth Memoir, Chapter 11.

and Charles-Edouard Jeanneret (the future LeCorbusier).³⁰ These three men, soon to become the leading lights of twentieth-century architecture, were drawn to Behrens' studio by his work, which struggled to reconcile tradition and modernity, to establish a vocabulary that honestly revealed the role of industry in building. Behrens served as chief designer for the Allgemeine Elektrizitätsgesellschaft (AEG), a corporation producing a broad range of machines and appliances that lay at the heart of the German nation's organized effort to become a world industrial power. Acting as a graphic designer, industrial designer and architect, Behrens' office designed nearly everything for AEG, from letterhead, to lamps, to manufacturing buildings, creating a unified visual expression for the company. Working in a Germany determined to quickly match England's industrial prowess, Behrens sought a new aesthetic, a *Neues Bauen*, that threw off the overt revivalism of the nineteenth century while maintaining its refinement and communicating the soul of a newly-unified and energized Germany.³¹

Gropius and Jeanneret merely passed through Behrens' studio, absorbing lessons but contributing little, while Mies worked for him for several years and became one of his leading draftsmen. In 1911, Mies was put in charge of the project for a large villa for Dutch industrialist A.G. Kröller-Müller, and in 1912 the client fired Behrens and hired Mies to work independently on the project. The house never came to fruition, but the commission brought Mies to Holland and introduced him to the work of Hendrik Berlage, a leading Dutch architect (who also proposed a design for the Kröller-Müllers' home). Both consciously seeking a "modern" approach, Berlage and Behrens differed markedly in their aesthetic aims. Behrens' work referenced a perceived *Volksgeist*, a unique German spirit, as a means to order, distinguish and enliven an architecture free of historicist reference.³² Berlage, however, took a rationalist approach, denying any need for cultural reference or distinction, rather appealing to a sense of *Sachlichkeit* (literally, thing-ness), the essential spirit of the object. Guided by materials, typology, science and reason, Berlage worked to replace "style" with a logical repose, a sense of restfulness and grandeur. Rather than a symbol of aspiration, belief or spirit, a building could simply reflect the fullness of its function and a beauty of detail. Later, Mies denied that Behrens influenced his thinking, but claimed a great debt to Berlage. The 1910 publication of Frank Lloyd Wright's Wasmuth Portfolio brought Wright to Berlin, and brought Mies into contact with Wright's organicism and his experiments in spatial interpenetration.³³ Mies acknowledged that Wright's published work also exerted a tremendous influence upon him and other young German architects of the period.

³⁰ Mies and Gropius were in Behrens' studio together for some time, although they did not work on any significant projects together. Jeanneret was a Swiss student who spent about six months in the office, primarily at a time when Mies was working elsewhere. Later, Mies recalled only meeting him once in passing. Schulze, *A Critical Biography*, 41.

³¹ For the history of Germany's organized industrialization campaign, led by the Deutscher Werkbund, please see John Maciuka's *Before the Bauhaus* (New York: Cambridge University Press, 2005).

³² For a thorough presentation of Behrens' theories, please see Stanford Anderson, *Peter Behrens and a New Architecture for the Twentieth Century* (Cambridge: MIT Press, 2000).

³³ In 1946, Mies stated "At this moment, so critical for us, the exhibition of Frank Lloyd Wright came to Berlin...The encounter was destined to prove of great significance to the European development. The work of this great master presented an architectural world of unexpected force, clarity of language and disconcerting richness of form." "A tribute to Frank Lloyd Wright," *College Art Journal* 6 (Aug. 1946): 41-42.

Early Career

Although seeking out mentors grappling with modernity, in the 1910s Mies' work was not in the architectural vanguard. In 1911, former studio-mate Gropius designed the groundbreaking Fauguswerk, a shoe last factory in Anfeld-an-der-Leine. Expanses of glass minimized the mass of the building and expressed the structure, defining a key principle of *Neues Bauen*, or the struggle for a modern architecture. At the 1914 *Deutscher Werkbund* exhibition, Bruno Taut's Glass Pavilion promised eternal health in a fantastic, crystalline, glass-enclosed civilization. Mies, meanwhile, returned to Berlin from Holland and established an independent practice. In 1913 he married Ada Bruhn, the daughter of a wealthy industrialist. The pair built a family quickly, producing three daughters (Dorothea, Marianne, and Waltraut in birth order) within the first four years of their marriage, and Mies spent rest of the decade designing fairly conventional suburban houses.

The Faguswerk and Glass Pavilion boldly herald a new age, but Mies' Urbig House (1915-1917) merely avoids direct stylistic reference and offers a studied version of the traditional formal house plan. The formal symmetry seems conservative, compared with his contemporaries' efforts to avoid axiality and blur boundaries. In his biography of Mies, Franz Schulze attributes this formalism, which would become an abiding characteristic of Mies' work, to his respect for the buildings of Karl Friedrich Schinkel. In Schultz's view, symmetry became a meaningful way to imbue Mies' revolutionary works with a sense of gravity, balance and continuum. Germany entered the Great War in 1914, and while fighting isolated the nation and halted most private construction, Mies' age, status as a married man, and Ada's wealth sheltered them from the greatest depredations of the war. He avoided service until 1917, when the German government ordered Mies to join a company of bridge engineers in Romania, where he served until the war ended in November 1918.³⁴

Post-World War I Theoretical Work

The armistice, the heavy strictures of the Versailles Treaty, and the perilous nature of the Weimar Republic stagnated post-war recovery and undermined the reigning social order. This enforced idleness and instability provided rich fodder for the German artistic community. Creative outbursts by expressionist painters, sculptors and other artists rejected the past, communicated the war's horrors, or anticipated a bright democratic future. Although the destruction of the war demanded rebuilding and new construction, the nation's economic collapse meant that most architects spent the post-war years designing on paper, theorizing unreal worlds and inspiring or offending each other with their experimental visions. Taut, designer of the Glass Pavilion, blazed the trail with *Alpine Architectur* (1917), a publication of drawings illustrating a fantasy world of crystals, gems, glaciers and glass. Reeling from an international catastrophe spurred by secret treaties, Taut and other designers seized on transparency as a quality of health, unity and truth. The working-class son of a mason, Mies had previously remained aloof from Germany's more radical artistic movements, but bereft of paying work, he socially and intellectually plunged into Berlin's lively artistic scene in these post-war years.

³⁴ Schulze, *A Critical Biography*, 81.

In 1919, a friendship with artist Hans Richter drew Mies into a progressive group that also included artists Hans Arp, Theo van Doesburg, El Lissitzky, Man Ray and sociologist/critic Walter Benjamin. An association with these more radical artists and thinkers had a refining effect on Mies. Two years of discussion and debate forced him to examine and articulate his own approach. Rejecting the irrelevance of historicism, theoretically eschewing the irrationality of Taut's expressionism, and the conscious caprice of the Dadaist movement, Mies and his cohorts began building an artistic philosophy on the back of Berlage's *Sachlichkeit* and the Dutch de Stijl. Starting with the rational expression of reality, their *Neue Sachlichkeit* took on truth as their sole, hard-edged responsibility in all the arts, belittling all appearances of romanticism or perceived irrationality, and rooting out the artificiality of style.

Mies' 1921 entry into a competition for the Friedrichstrasse Office Building illustrates his participation in this larger dialogue and his transformation into an overt modernist. Influenced by Taut's belief in the power of crystals and transparency, Mies redefines the very notion of the skyscraper. Made possible by William LeBaron Jenney's structurally innovative 1885 Home Insurance Building in Chicago, the skyscraper represented a distinctly modern building type that required a new visual expression.³⁵ Previous architects had interpreted the tall building as a column, with tripartite divisions of thick, low base, repeated shaft and crowning capital. In his Friedrichstrasse entry however, Mies definitively illustrates the aesthetic potential of a unified structure, casting these earlier efforts to repurpose historic idioms aside as so much romantic woolgathering. Rejecting the false heaviness of masonry-clad, metal-framed boxes, he created a sleek, unified object, the skyscraper as a soaring shaft that revels in its spare structure and tangible lack of mass. An infinite number of identical, open floors promised to accommodate all types of activities, providing maximum flexibility and a sense of infinite space. Although recognized by the jury as "an enriching effort to master the fundamental problem of the tall building,"³⁶ Mies' entry did not address the specific program and failed to win the competition. It did, however, mark the birth of his mature style. No longer a traditional architect peeling off unnecessary details, with the Friedrichstrasse entry Mies identified a powerful new aesthetic inherent in rational planning and the materials of the industrial age.

For Mies, 1921 was a year of new beginnings. In addition to the bold declaration of the Friedrichstrasse entry, in that year Mies abandoned his role as a traditional husband. Since their marriage in 1913, the Mies' had not enjoyed a particularly companionable life. In the latter half of 1921, Ada moved their daughters to the Potsdam area, some thirty miles southwest of Berlin, and Ludwig took up full time residence in their Berlin apartment. At first he spent weekends at the house, but his visits gradually became irregular. Within a few years, Ada and their daughters moved to Switzerland, Austria, and then to Bavaria, further separating the family. The couple never divorced, but never lived together again. In 1921 Mies also added "van der" and his mother's maiden name to his surname, rechristening

³⁵ For the definitive discussion of the development of the skyscraper, see Carl Condit, *The Chicago School of Architecture; a History of Commercial and Public Building in the Chicago Area, 1875-1925* (Chicago: University of Chicago Press, 1964).

³⁶ Max Berg quoted in Schulze, *A Critical Biography*, 96.

himself Ludwig Mies van der Rohe, which held connotations of Netherlandish origins and nobility.

Mies emerged from 1921 a changed man socially and artistically, but Germany still lay in economic doldrums, idling the architectural profession. Between 1922 and 1924, Mies joined a new art group, which also included *Neue Sachlichkeit* members van Doesburg and Lissitzky. “(I)n search of universally valid, super-personal, elemental media of artistic creation,” the group published four volumes of the journal *Zeitschrift für Elementare Gestaltung*, also known as *G*.³⁷ In a 1923 issue, Mies declared, “essentially our task is to free the practice of building from the control of aesthetic speculators and restore it to what it should exclusively be; Building.”³⁸ Mies, along with his compatriots, insisted on art’s sole responsibility to physical reality and physical truth. In addition to his writing for *G*, Mies designed several ideal projects in this period. His Brick Country House of 1924 illustrates his close relationship with the other writers of *G* at that moment. In the plan of this work, Mies builds on the space exploration of Frank Lloyd Wright’s prairie school houses and the asymmetrical momentum of constructivist art, as seen in compatriot van Doesburg’s 1918 *Rhythm of a Russian Dance*.

In addition to demanding rationality in the arts, in the first years of the 1920s the *Neue Sachlichkeiter*s stood as critics of the Bauhaus, the most advanced art school in the nation at that moment. In 1919, Gropius joined the Saxon School of Arts and Crafts and the Weimar Academy of Fine Arts, locating the merged institution in Weimar. The central tenet of Gropius’ program built on the writings and works of John Ruskin and William Morris and the British Arts and Crafts movement. Stating that the industrial-age separation of the arts and handicrafts lay at the root of the contemporary world’s problems (aesthetic and otherwise), these Englishmen believed that rejoining them would heal the ills of the larger world. While Morris advocated and funded an actual return to handicraft, within a few years after the founding of the Bauhaus, Gropius reinterpreted the theory as a means to marry industry and design, to use industry to propagate good design, a logical advance on (and simultaneously a rejection of) the Arts and Crafts credo. The school brought all students together for an initial *vorkurs* that established basic principles of design-- material, composition and color. Pupils then used that knowledge to advance in a wide range of individual fields, from textiles to painting to industrial design, to (eventually) architecture. The faculty included artists Gerhardt Marcks, Lyonel Feininger, Paul Klee, Wassily Kandinsky, and Oskar Schlemmer. Swiss Johannes Itten was the first master of the *vorkurs*. Itten drew deep artistic inspiration from daily meditation, and his course, partially based on the educational theories of Friedrich Froebel, encouraged students to fully develop their own personal visions. His romantic, expressionist stance stood in stark contrast to the hard line rationalism of Mies and the *Neue Sachlichkeit*, and that group’s pressure eventually led to Itten’s forced resignation in 1923.

Hungarian *Neue Schlichkeiter* Lazlo Maholy-Nagy replaced Itten and the move allowed for a closer relationship between the nation’s most outspoken *Neues Bauten* artists and the leading modernist school. These relationships, however, were hardly harmonious or unanimous. Each

³⁷ Sandra Honey, *Mies van der Rohe: European Works* (New York: St. Martin’s Press, 1986), 18.

³⁸ 1923 *G* quoted in Schulze, *A Critical Biography*, 106.

artist had his own vision and each passionately argued in discussion and in writing over their differences. By 1924, Mies seemed to be moving away from the functionalism inherent in *Neue Sachlichkeit*'s rationalist position. More than simply communicating rational truth, in his writing and theoretical designs Mies began to suggest that architecture could and should express a higher spiritual reality. He read the philosophy of St. Thomas Aquinas, and St. Augustine's dictum, "Beauty is the splendor of Truth" began to inspire his work.³⁹ In the years 1923 and 1924, Mies also began proselytizing for the entire *Neues Bauen* movement, showing his unbuilt designs, including the Friedrichstrasse skyscraper and the Brick Country House, in exhibitions.⁴⁰ He joined the *Deutscher Werkbund*, a national organization formed at the turn of the century to advance the cause of Germany's unified industrial design and development. Considered *recherché* by many of his compatriots, Mies' membership allowed him to influence more traditional and established designers and to advocate for the *Neues Bauen* as a credible artistic force as Germany emerged from the post-war crisis.

Mies's First Master Style

Mies' *Werkbund* outreach paid tremendous personal dividends in 1925 when he was appointed artistic director of their 1927 Exposition. Working together, the city of Stuttgart and the *Werkbund* conceived of the program as a housing complex to serve initially as a demonstration of technology in design and ultimately as a permanent residential community. Mies' stature as a credible *Neues Bauen* architect with a substantial body of work won him the post of chief designer, with responsibility for laying out the site plan, hiring individual building architects and directing their designs. Biographer Franz Schulze suggests that the opportunity to create a large commission released Mies from the rhetoric of functionalism he had espoused as a *Neue Sachlicheiter*; allowed him to widen his vision beyond the linguistic squabbles endemic to art theory; and encouraged him to explore the possibilities of using form and material to transcend, rather than merely reflect nature.⁴¹ Awarded a long, narrow, hilltop site in the Weissenhof district, Mies never contemplated the *zeilenbau* pattern established by most new German housing complexes, which sited buildings at sun angles and separated them at regular intervals figured to assure light and air flow -- eminently functionalist concerns. Rather, Mies compromised site and regularity, siting buildings along either side of a single, coiling walking street that culminated at a hilltop plaza.⁴²

Rather than selecting architects that lay comfortably within the German *Neue Sachlichkeit* camp, Mies broadened his scope to include architects who inspired his thinking. The group included German modernists Behrens and Gropius, but also Hans Sharoun and Bruno Taut, who other *Neue Sachlicheiter*s might have deemed too expressionist for credibility. J.J.P. Oud and Mart Stam from Holland also participated, along with Swiss LeCorbusier, who had

³⁹ Peter Blake, *The Master Builders* (New York: Knopf, 1960), 170.

⁴⁰ Mies developed and exhibited five theoretical projects in this period, the Friedrichstrasse Office Building, the glass skyscraper (an elaboration on the Friedrichstrasse entry), the brick country house, the concrete country house, and the concrete office building. All five were developed and redeveloped over time, refined and redefined to express Mies' evolving ideas.

⁴¹ Schulze, *A Critical Biography*, 133

⁴² Yehuda Safran, *Mies van der Rohe* (Lisbon: Blau, 2000), 34.

drifted through Behrens' studio in Mies' time.⁴³ Rather than establishing lengthy design requirements, Mies offered the men building plots and specified flat roofs and a light color palette. Despite Mies' limited direction, the sixteen different architects produced a varied, yet unified complex. Pure cubic volumes, broad expanses of glass and tubular steel balconies unite the twenty-one buildings containing sixty units, suggesting a momentary design consensus within Germany's architectural left as well as a comprehensive expression of a new design approach. Mies' own, four-story stucco building typifies the complex, with shallow slab balconies alone breaking the strict rectilinearity of the box, with long horizontal strips of windows and roof balconies both defining and defying the building's taut profile. The Weissenhof exhibition drew up to 20,000 visitors daily and captured international attention.⁴⁴ Progressive critics decried it either for lacking cultural reference or for appearing romantic and *unsachlich*, but the unity of the large complex impressed many more as a vision of the future.⁴⁵ Mies' interest in the design of beautiful spaces, rather than the creation of a maximum number of efficient units, suggested his retirement from the *Neue Sachlichkeit* movement and his emergence as an independent artist, free of the strictures of the group.

The Weissenhof project also required furnishings, giving Mies the chance to expand his work into interiors. In this, Mies worked with Lilly Reich, a textile designer, Werkbund member, and for a time, his partner in matters professional and personal. Scrupulously correct in all things, Reich's designs had an inspiring textural elegance and refined richness.⁴⁶ Building on the tubular steel chairs of Marcel Breuer and Mart Stam, Mies created the cantilevered MR chair for the Weissenhof project.⁴⁷ The functional, studiously proportional chairs clearly reflected Mies' earlier work, but the rich chrome and luxurious leather betrayed Reich's influence. The chair became an integral element of his Weissenhof apartments and an oft repeated element in Mies' later works.⁴⁸

As a leading architect in a finally-recovering Germany, Mies received a number of commissions in the later years of the 1920s and was hired to oversee the nation's representation at the 1929 Barcelona International Exhibition. Reich took on much of the

⁴³ For a full discussion of the Weissenhof Siedlungen project, please see Richard Pommer and Christian F. Otto's *Weissenhof 1927 and the Modern Movement in Architecture* (Chicago: University of Chicago Press, 1991).

⁴⁴ Honey, 18.

⁴⁵ Richard Döcker, letter to Mies van der Rohe, 18 May 1926, Mies archive. Quoted in Schulze, *A Critical Biography*, 134.

⁴⁶ Schulze, *A Critical Biography*, 139.

⁴⁷ Otakar Máčel, "From mass production to design classic: Mies van der Rohe's metal furniture." In *Mies van der Rohe: Architecture and Design in Stuttgart, Barcelona, Brno*, eds. Alexander von Vegesack, Matthias Kries, 18/57 (Milan: Skira, 1998), 22. Breuer designed a tube steel chair in 1925 for the Bauhaus. According to Mies, in 1927, Mies and LeCorbusier met with Dutchman Mart Stam and learned of his cantilevered tube steel chair. Mies took his idea and changed the basic form to minimize the number of elements and create a more elegant profile.

⁴⁸ Mies and Reich also worked together on a product exhibition hall in Stuttgart, opened for the Werkbund event, as well as several subsequent exhibitions. In Stuttgart, they designed a plate-glass manufacturers' space that used colored glass and linoleum to direct visitors through a series of rooms, and those flowing spaces obviously inspired Mies' work at the Barcelona Pavilion. The authorship of many of Mies' early furniture pieces has been called into question recently, as many suggest Reich played an important role in their creation. For further information on Reich, see Matilda McQuaid, *Lilly Reich: Designer and Architect* (New York: Museum of Modern Art, 1996).

work of planning and outfitting the exhibit spaces, leaving Mies to design and perfect the gateway to the German area.⁴⁹ Built solely to provide a place to welcome the king and queen of Spain on the opening day of the German section, the Barcelona Pavilion capitalized on this relative lack of function, becoming a study in space exploration and simplification, a thesis statement of Mies' work up to that moment.

Located at a terminus of the transverse axis of the fair, the pavilion stands on a waist-high platform, recalling Schinkel in its classical siting.⁵⁰ This formalism, however, is denied by the shifting planes of marble, travertine and glass that stand atop the base, resisting all sense of symmetry or axiality. Refined from the ideas in his Wright-influenced Brick Country House plan, the walls of the main façade resist enclosure, slipping beyond the thin, flat roof on the right. On the left, a travertine wall lined by a travertine bench, stops short of meeting the enclosing site wall. A shallow pool lies at the other corner, reflecting its surroundings, a natural element integrated into the honed and diffusing structure. On the right, matched panels of green marble extend beyond the eave, an indication of the material richness within. Green-tinted plate glass encloses the rest of the façade, with each narrow, full-height panel framed by chromed muntins. The paired doors are set into a short wall perpendicular to the main façade, evading classical symmetry. These doors lead into the single enclosed space, revealing an area with a regular grid of thin, chromed steel, cross-shaped columns that support the roof and rest at the intersection of the travertine floor tiles. A gold onyx-veneered wall stands at the center of the room, imbuing the space with a magnificent richness. Beyond, glazing separates the area from a second smaller pool tightly enclosed by green marble walls. A George Kolbe sculpture stands at the far corner of the pool, serving as a terminus for the axes formed by the shifting stone wall plates. The elegance of the materials evidences Reich's impeccable taste. Shining veneers and gleaming finishes obscure the quotidian attachments that support this structure, transforming the entire composition from reality into idea, an architectonic expression of motion, of objects spreading away from center. Mies also designed furniture for the space, including flat steel-frame, white kid-upholstered thrones for the royal visit, which were later reproduced as the Barcelona Chair, one of the twentieth century's most significant furniture pieces.⁵¹

In 1928, as the Barcelona work was ongoing, Mies received another significant commission, the design of a home for the newly-married, wealthy Tugendhat family of Brno, Czechoslovakia (now the Czech Republic). The house borrowed many elements from the Barcelona Pavilion, compromising those free-flowing, finely-finished surfaces with a more

⁴⁹ Schulze paints Reich as a willing woman, handling distasteful chores for Mies, but Reich used her experience with Mies to improve her own professional standing. She designed a free-standing house, along with several apartments at the subsequent 1931 Berlin Building Exhibition. McQuaid characterizes her support of Mies as a means to gain experience and renown, necessary for a career woman at a time and place that offered few chances to women designers. After Mies moved to the United States, Reich handled his German business affairs until her death. McQuaid, 55.

⁵⁰ The Barcelona Pavilion was dismantled in 1930 at the end of the exhibition, but was reproduced in new materials on the site in 1983-87. For a discussion of the reconstruction see Ignasi de Sola-Morales Rubio, Christian Cirici, Fernando Ramos, *Mies van der Rohe: Barcelona Pavilion* (Barcelona: Gustavo Gili, 1933).

⁵¹ Initially designed as a unique piece for the pavilion, in 1947 American furniture manufacturer Knoll began reproducing the Barcelona Chair for sale, establishing it as an icon of modern design.

demanding residential program. Again, Mies used cruciform chromed columns to support the structure, leaving him free to arrange interior walls and partitions for use alone. Built into a hill, one enters the house on the second floor and descends a curving stair to the main floor below. A basement level houses service spaces. From the street, the façade consists of three elements; a stuccoed garage block on the right; a largely blank mass of stucco and curved obscure glass on the left; with a passage to the rear patio between them. The curved glass leads to a glazed door perpendicular to the main façade, which opens into the entry, accessing the second floor bedrooms for guests, children and servants, along with a curving stair leading down to the main spaces of the house. On the first floor, the stair leads into a large, rectangular living space with full-height glazing on two exterior walls. A hard right turn from the stairs leads to the master suite, obscured behind a milk-glass wall. Again, chromed, cross-shaped columns support the space, freeing the walls from structural obligations. An onyx wall and a book-matched, macassar-veneered curved wall stand free, establishing zones within this large space. The dining table is tucked into the round wall, with the living room adjacent, facing the full-height windows. A sublime onyx wall suggests the rear of the living room, with the music room, library and study zones behind. The enclosed winter garden lies along the short side wall, and a large open terrace along the main façade looks onto the garden and a view over Brno. Half of the full height windows (every other one), can be mechanically lowered into the floor, physically joining the main living space with the exterior. Cream-colored sheet linoleum covers the floor, with natural rugs defining use areas. Black curtains line the winter garden wall (silk in the summer, velvet in the winter), with white raw silk along the main façade.

In many respects, the commission resembled the Barcelona one, with the open plan and a similar palette of elegant materials. The Tugendhats also allowed Mies to design furnishings. He specified MR and Barcelona chairs, but also designed the Tugendhat armchair, and the Brno dining chair. He designed a square, glass-topped coffee table with a chrome X-shaped base and all three became standards of modern interior design.⁵² He created a unique pear-wood dining table with a single, chromed, cross-shaped leg, set within the curve of the macassar wall.

Nazi Conservatism Freezes Progressivism in Art

In 1930, Mies accepted the position of director of the Bauhaus, selected as a talented and apolitical leader for a school mired in internal and external politics. Gropius opened the merged institution in Weimar in 1919, and replaced Itten with Maholy-Nagy in 1923 to pacify the artistic left, but soon found his school at odds with Weimar's emergent political conservatives. In 1925 Gropius constructed a generous new campus in the more liberally-governed city of Dessau. Within a few years, however, the Nazi party found a following in Dessau and in 1927 Gropius stepped down as head, in hopes of relieving the mounting opposition to the school as a bastion of dangerous radicalism. He offered the job to Mies, who declined, and then he nominated Swiss architecture faculty member Hannes Meyer. Meyer spurred internal controversy by increasing curricular emphasis on functionalist architecture at the expense of the other arts, and as an ardent *Neue Sachlichkeit* and an unapologetic leftist,

⁵² Máčel, 46.

Meyer raised the ire of the political right with his openly held Marxist beliefs.⁵³ Mass housing became the *de rigueur* design assignment, reflective of Meyer's aesthetic and political agendas. Gropius founded the school to create beautiful, well-designed industrial objects, but Meyer redefined the definition of beauty, seeing in industry the opportunity and obligation to create a maximum quantity of affordable goods, in order to improve the life of the putative worker.

It soon became obvious that Meyer could not continue as head, and politically-disinterested Mies seemed a good choice to calm political criticism. He accepted the position and then further revised the curriculum, virtually eliminating art in favor of architecture. Mies also halted all overtly political activities and instituted more academic rigor, assigning simple design assignments and demanding intensively detailed solutions. He faced opposition from Marxist students who regarded his elegantly-finished built works as decadent, but he offered them no quarter, expelling all dissidents and readmitting them only after a personal interview. While quelling the internal insurrection, Mies could do nothing about the growing instability of the German government, the hostile conservatism of the Nazi party.⁵⁴ Although staunchly apolitical, Mies' aesthetic progressivism aligned him with Gropius and Meyer and it proved impossible to cleanse the school of its radical reputation. The city of Dessau closed the campus in 1932. Mies returned to Berlin and reopened the Bauhaus as a private school with some of the Dessau faculty. He hoped to quietly operate through the political turmoil, but the Nazis suspended classes in April 1933, due to alleged communist links. Three months of limbo weakened the school's shaky finances and Mies and his faculty voted to finally close the school permanently in August.

Watching his nation retreat into a self-imposed dark age of traditionalism and violently enforced consensus, Mies had only a few clients and the failing Bauhaus to absorb his time, but beginning in 1930, a new admirer began to suggest Mies might find improved possibilities elsewhere. Up to that point, the American art world had taken little notice of the European *Neues Bauten*. In 1929, architectural historian Henry-Russell Hitchcock wrote *Modern Architecture*, focusing on Le Corbusier and Oud. In 1930, Philip Johnson, the twenty-four year old architecture curator for New York City's Museum of Modern Art (MoMA), spent the summer in Europe viewing works of the *Neues Bauten*. He learned of Mies' work from German publications and recognized a singular talent. Johnson visited Mies in Berlin, commissioned him to design his New York apartment and asked him to develop a new residential design for an upcoming exhibition at the MoMA, the 1932 International Style show, which signaled America's popular introduction to contemporary European art.

⁵³ In 1928, the National Socialist party began monitoring art for its conformance to Nazi principles, and in 1930 architect Paul Schultze-Naumburg began a campaign against the *Neues Bauten*, sponsored by the Kampfbund. In 1933, Hermann Goebbels founded the Reichskulturkammer to officially monitor and control all artistic output. Honey, 20.

⁵⁴ In 1930, battles between democrats and communists weakened both parties, and increased the minority Nazi Party's strength. In July 1932 Nazi's gained a majority in the Reichstag, promising to bring order back to a nation spiraling into lawlessness. In January 1933 Hitler was appointed Reich Chancellor, and soon after began suspending civil rights, expanding the power of his position and instituting purges of his opponents.

The American architectural world began to take notice of their European compatriots' work just as Germany became a dangerous place to practice all but the most traditional architecture. In 1933, Josef Albers and his wife Anni, former Bauhaus faculty members, took positions at North Carolina's Black Mountain College. Erich Mendelsohn decamped to England, eventually moving to the University of California (Berkeley) in 1941. Gropius escaped to Britain in 1934, then to the United States in 1937 as a faculty member of the new Harvard Graduate School of Design. Breuer soon joined him there as his second-in-command.⁵⁵ Mies, however, resisted abandoning his native land, despite a political climate that increasingly conflated modern art and architecture with political subversion.⁵⁶ As if in response to this rising hostility, in the early 1930s Mies, unburdened of paying work, designed a series of theoretical courtyard houses with high masonry walls protecting delicate glazed interiors, evocative of a desire for protection from the violence of the times.⁵⁷

Mies in America, His Second Master Style

In the spring and summer of 1936, Mies began to receive propositions from America. Barr visited him, offering the commission for a new MoMA building. He was considered for a position at Harvard (which Gropius eventually took), as well as the director of the architecture department of the Armour Institute of Chicago. The New York and Boston jobs were never formally offered, but in the summer of 1937 the Resnor family, at Barr's suggestion, invited Mies to design a summer house for a site near Jackson Hole. Chicago layovers on the way to and from Wyoming allowed Mies to visit the city and meet with the Armour Institute's board of directors. After three days of discussion, the board offered Mies the directorship of the School of Architecture, and he accepted. He then spent several months in New York, developing a curriculum and designing the never-constructed Resnor House.⁵⁸ After a perilous four month return visit to a Berlin readying for war, Mies moved to Chicago in late 1938. Bringing few possessions, and initially residing in the Stevens Hotel, Mies seemed to anticipate a temporary stay. Lilly Reich visited in early 1939, but returned home in the summer. The war began in September, cutting Mies off sharply from his earlier life. Taking an apartment and eventually learning English strengthened his American ties. He became a naturalized citizen in 1944, just as the European war ended. Reich died in 1947, and his estranged wife Ada died in 1951, further loosening Mies' connections to his homeland. His daughters visited him frequently, and both Marianne and Waltraut lived with him for some

⁵⁵ See Jill Pearlman, *Inventing American Modernism: Joseph Hudnut, Walter Gropius and the Bauhaus Legacy at Harvard* (Charlottesville, University of Virginia Press, 2008) for a further discussion of this period.

⁵⁶ Mies built little during the Nazi rise to power, but participated in several Nazi-sponsored design competitions, including the 1933 Reichsbank in Berlin and the design for the German Pavilion at the 1935 International Exposition in Brussels. Elaine S. Hochman's *Architects of Fortune: Mies van der Rohe and the Third Reich* (New York: Weidenfeld & Nicholson, 1989) explored Mies' relationship with the Nazi regime, ultimately concluding, largely in concert with principal biographer Franz Schultz, that Mies was devoutly apolitical, concerned solely with seeing his ideas take built form. In her introduction, Hochman concludes that Mies left Germany not in opposition to Hitler's policies, but because his personal taste made it difficult for him to practice his architectural approach, an ideology more sacred to Mies than any political or moral position.

⁵⁷ In 1936, a client in Krefeld, in the west of Germany, was denied a building permit unless he built a berm to obscure Mies' house from the street because of its degenerate nature.

⁵⁸ The Resnor House was based on the delicate courtyard houses Mies was designing in Germany, but on an open, magnificent site, dispensed of the protecting exterior walls. The house bridged a stream, and this sense of freedom from the ground plane would prove an important precedent for the Farnsworth House.

years after the war. Mies visited Germany in the 1960s, but by that point, his life lay in Chicago.

At the beginning of the 1938 school year, Mies assumed directorship of the Armor Institute's architecture department, located in the attics of the Art Institute of Chicago. The institution absorbed the bulk of his time for his first few years. At this time, the Armor Institute was in negotiations to merge with Lewis College, and there were plans to expand the main south side campus for the new institution. Extending three blocks east from the current nine-acre campus at 33rd Street and Federal Street, once a fashionable part of town, the district lay near to what had been a small African-American neighborhood prior to the Great War. The black population of Chicago grew tremendously during the war, and the race riots of 1919 concretized the nature of Chicago's black neighborhoods, altering them from casual entities to tight and formal districts with boundaries enforced by mob violence. The Great Depression meant that idle sharecroppers continued to stream north, increasing the number of African-American Chicagoans without a concomitant growth in jobs or residential area, causing densification, a deterioration of the existing building stock, and tremendous human suffering - the development of the slum. Purchasing several of these blocks was an early, private effort at urban renewal, an attempt to clear slums and to redirect the grim fortunes of Chicago's south side.⁵⁹

Dean Henry Heald recognized the artistic power and prestige of a Mies-designed campus, and in 1939 he asked his new architecture professor to begin a campus plan.⁶⁰ Assigned a flat site three blocks long by two blocks wide, Mies initially proposed closing several streets and creating two large superblocks that defined a strong center for the school community, in recognition of the deteriorated conditions surrounding the campus. By 1941, city resistance to closing Dearborn Street caused him to shift away from the superblock plan, instead spatially uniting blocks physically separated by streets. Mies adopted a twenty-four foot module for building design, based on classroom dimensions and the size of the standard Chicago block, and he used that figure to guide all site and building decisions, setting a simple but powerful standard for the long term expansion of the campus.

By 1941, the academic merger was finalized and the school announced Mies' plans for the campus of the new Illinois Institute of Technology (IIT). Generally modest finances meant that Mies designed and constructed the campus buildings over the course of three decades. In order to maintain a consistency, he established a basic vocabulary for the buildings, refining methods and details over time. The twenty-four foot module determined the siting and size of most of the rectangular, one- to three-story, flat-roofed buildings.

At IIT, Mies again found himself at the helm of a merged institution of design, but this time, rather than inheriting mantle of the backward-looking arts and crafts, IIT was sprung from the firmly forward-focused American idealization of science and technology. Apropos to this

⁵⁹ Phyllis Lambert, "Learning a Language," in Lambert ed., *Mies in America* (Montreal: Canadian Centre for Architecture, 2001), 225.

⁶⁰ Chicago architect Alfred S. Altschuler was also developing a plan, and had many friends among the board of the school, so Mies' design was kept quiet until Altschuler's death in 1940.

mission, Mies, the son of a mason, turned away from the materials of his best European work, away from the rarified richness of the travertine and onyx that distinguished his best projects in Germany, and immersed himself in the mass-produced materials of the modern age. The buildings of IIT are composed of industrially-produced buff-colored bricks laid in English-style bond and wide expanses of glazing spanning between black steel columns and lintels, the visual structure of the buildings. In fact, fire codes required Mies to bury the actual structure of the buildings within a concrete frame, so the steel exposed at the exterior is a signifier, a symbol of the structure.⁶¹ As artfully articulated as a frieze or a Corinthian capital, these steel members are no mere decorative elements, rather transformed through proportion, detailing and intent into symbols of truth.⁶² In redesigning these same elements for each of his buildings at IIT, Mies explored and perfected this new vocabulary. In addition to jettisoning masonry for steel as a primary material, in this new phase of his career, Mies also took up the perfection of engineering methods rather than his earlier focus on plan and materiality.

Experimentation in steel inspired Mies, as did the arrangement of buildings on the site. Built over a long period, the final IIT campus plan only partially reflects Mies' original, 1941 proposal, but in both the master plan and in the built campus, he carefully studied the relationship of building to open space. As early as the Friedrichstrasse skyscraper, Mies explored the concept of universal interior space, and at IIT he considered this concept from both within and without his buildings, working with assistants on innumerable perspective drawings of the campus.⁶³ Abandoning simple axuality, Mies' used his buildings at IIT much as he used his marble walls at the Barcelona Pavilion, resisting stiff symmetry, perpetually sliding out of plane, suggesting motion and expanding space.

Influence of the Farnsworth House

When Mies and Farnsworth fatefully met in the winter of 1945-46, the architect had not completed a significant residential work since his move to the United States, and his IIT work formed a critical basis for the design of the house. The Farnsworth commission brought Mies a measure of infamy, but the technical and conceptual issues raised by the design proved invaluable.⁶⁴ In planning the interior, Mies further refined his concept of universal space. The detailing of the columns, roof, and windows gave him the chance to develop a meticulously considered vocabulary for steel design. In the 1950's, he designed several variations on an ideal open, steel-framed, square house, with cabinets as partitions, and posited them as mass housing. Although the designs failed to come to fruition, Mies later transformed the single glass room concept into Crown Hall, the architecture school at IIT. Undoubtedly the centerpiece of his campus, Crown Hall (1950-1956) builds on the Farnsworth precedent. The steel framed structure, raised six feet above the ground, isolates itself much as Farnsworth's

⁶¹ Peter Eisenman, *Ten Canonical Buildings 1950-2000* (New York: Rizzoli, 2008), 53. According to Alberti, Vitruvius' definition of *fermatas* is both structural stability and the outward sign of structural stability. Mies' use of an appended "symbolic" structure has garnered significant criticism over time, seemingly in contradiction to his dedication to honesty and minimalism in architecture. With an understanding of the dual nature of systems, the visual expression is more disclosure than dishonesty, more poetry than decoration.

⁶² Schulze, *A Critical Biography*, 234.

⁶³ Phyllis Lambert, "Learning a Language," in Lambert ed., *Mies in America* (Montreal: Canadian Centre for Architecture, 2001), 273.

⁶⁴ Schulze, *A Critical Biography*, 259.

home does. Farnsworth House's meticulous detailing predicts Crown Hall's expressed trusses and minimal muntins. Even in terms of plan, the building is another universal space divided by furniture rather than full walls.

International Style Icon

In 1932, Johnson and Hitchcock, with museum director Alfred Barr, mounted "The International Style," an exhibition that announced the *Neues Bauen* to the New World. Not only did the show introduce modernism to America, but also it codified the visual tenets of a loosely-bound design movement defined more by a common aim to escape traditionalism than by any consistent or dictated guidelines. Johnson and Hitchcock selected the term "International Style" to recognize common movements in Holland, France, Germany, Finland and other European nations grappling with the issue of industrialization. They also identified three visual characteristics of this modernism which seemed, to them, essential to the style. "...first, a new conception of architecture as volume rather than as mass. Secondly, regularity rather than axial symmetry serves as the chief means of ordering design...with a third proscribing arbitrary applied decoration..."⁶⁵ Although artists saw modernism as a means to escape artificial "style," Hitchcock and Johnson's analysis transformed their aesthetic attempts into their own style.

The exhibition proved influential, controversial and enduring. In assembling the exhibition, Johnson and Hitchcock dismissed some significant contributors to the movement. They cited the critical position of Frank Lloyd Wright's Prairie School works and his *Wasmuth Portfolio*, but cast him as a forefather, no longer relevant, despite the fact, in 1932 at the age of sixty-five, he had nearly three decades of productive design ahead of him. Personal disagreements or aesthetic deviations from the above dicta kept Rudolph Schindler and other architects out of the show and diminished their later careers and historic reputations. None of these issues, however, would have been acknowledged if the show had not been an astounding success, the wellspring of modernism in America. Johnson's esteem secured Mies a prominent place in the exhibition, with drawings, photos and models of his Weissenhof Siedlung building, the Barcelona Pavilion and the Tugendhat House. The show codified modernism for the American audience and began a professional dialog that would eventually crown LeCorbusier, Gropius and Mies the leading lights of the movement.

The International Style exhibition appeared at MoMA in New York in 1932, and subsequently toured the country. Smaller sections of the show, augmented with local examples, appeared in museums, galleries and department stores in Cleveland, Chicago, San Francisco and elsewhere. Hitchcock and Johnson also published a book on their newly-coined International Style. Six years later, in the fall of 1938, when Mies finally came to the United States, he found that Hitchcock and Johnson had already paved the way and established him as a leading light of th

⁶⁵ Henry-Russell Hitchcock and Philip Johnson. *The International Style: Architecture Since 1922* (New York: Norton & Co., 1932), 10.

Battleground for the International Style

O beautiful, for spacious skies, for amber waves of grain, has there ever been another place on earth where so many people of wealth and power have paid for and put up with so much architecture they detested as within thy blessed borders today?⁶⁶

Upon publication of the Farnsworth House drawings, and finally photographs, architects and the architecture press took a predictable, admiring interest in Mies' latest work. The 1947 MoMA model had alerted the architectural public to the house's revolutionary transparency. During construction, architects from all over the world accompanied Mies and Edith to the site and were, by Farnsworth's (heavily ironic) account, "fulsome in their words of praise at the miracle which was taking form in that rural spot."⁶⁷ Although known to those in the know, the notoriety stemming from the court case also prompted the popular press to take notice, and the legal trouble soon came to stand in for a larger public rejection of the "foreign" International Style at a moment when this movement, and particularly Mies' personal interpretation of it, was rising to dominate the American architectural world. At this time, Mies, Gropius and many other *Neues Bauten* architects had been in America for nearly two decades, developing and refining the ideas that Johnson and Hitchcock had codified in the *International Style*. The current post-war construction boom, however, meant that there was finally an opportunity to build on those ideas, on a large scale.

In 1947, Finnish-American Eero Saarinen won a national competition for the Jefferson National Expansion Memorial in St. Louis, the first major national monument in several decades.⁶⁸ His proposal for a massive, sleek catenary arch broke with the tradition of American monuments, ushering memorials into the modernist mainstream. Fellow Finn Alvar Alto's winding, brick Baker Dormitory at the Massachusetts Institute of Technology opened in 1948 and garnered critical attention and praise. Bauhaus founder Gropius finished the Harvard Graduate Center in 1950, illustrating his own, personal, and undeniably modernist approach. Mies' 860-880 Lake Shore Drive Apartments opened in 1951, redefining the tall building and the urban residence. Even Le Corbusier, who remained in Europe during the war, inspired and consulted on the meticulously stark United Nations Headquarters in New York, which opened in 1953.

By 1953, not only the leading lights of the International Style exhibition, but also the students they had spent the Great Depression and war years training, began to receive major commissions. Philip Johnson openly borrowed Mies' plan for the Farnsworth House, building his own Glass House in New Caanan in 1949. In 1952, Skidmore, Owings and Merrill

⁶⁶ Tom Wolfe, *From Bauhaus to Our House* (New York: Farrar Straus Giroux, 1981), 1.

⁶⁷ Farnsworth Memoir, Chapter 13.

⁶⁸ Rather than a member of the International Style coterie, Eero Saarinen had been principally trained by his father Eliel at Cranbrook Academy of Art in Bloomfield Hills, MI, but he also attended the Yale School of Architecture. He became a naturalized citizen in 1940, and worked for the Office of Strategic Services (OSS) during the war. His Finnish birth, however, made it simple to construe him as a foreign influence.

completed Lever House in New York, building on Mies' work and setting the dominant precedent for modern office buildings in the second half of the twentieth century. Just six years later, Mies (working with Philip Johnson) completed the thirty-eight story Seagram Building, across Fifth Avenue from Lever House. Louis Kahn's Yale Art Center, reconciling wood and concrete in a more sophisticated way than early modernists, opened in 1954. Even Frank Lloyd Wright, America's most prominent and outspoken native-born architect, redefined his idiosyncratic vision in light of these new ideas, as evidenced by the sensuous, white surfaces in his design for the Guggenheim Museum on Fifth Avenue in New York (completed 1959).

American International Style modernism was hardly a recent or sudden event. Wright himself had inspired the *Neues Bauen* with his Prairie School space explorations and organic credo, and the Art Deco thrived into the 1930's as an attempt to escape the bounds of historicism. The Philadelphia Savings Fund Society Building, constructed by William Lescaze and George Howe in 1932, was widely hailed as the first International Style building in the United States. During the Depression and New Deal, there were some International Style structures built, but most used small amounts of ornament to accent simple, blank building forms, a more popularly palatable form of modernism.⁶⁹ By the 1950's, however, the International Style's flat roofs and rejection of ornament -- historicist or otherwise -- seemed to be the dominant architectural expression in the nation, and many Americans conflated these unfamiliar forms with foreign political influences and rejected them as intolerable signifiers of a foreign influence.

Just as Mies' Tugendhat House raised objections to its suitability as a residence, the American press took aim at the Farnsworth House as a subversive attack on the American home. In April 1953, *House Beautiful* editor-in-chief Elizabeth Gordon wrote "The Threat to the Next America," an article which characterized the house as both Communist and un-domestic, the product of "a self-chosen elite who are trying to tell us what we should like and how we should live."⁷⁰ To Gordon, the chief opinion-maker of America's most influential shelter magazine, the Farnsworth House's steel frame and glass walls seemed rigid, antithetical to the "rich, earthy American style" that she believed reflected a national desire for liberty and space and which she saw exemplified in the work of Frank Lloyd Wright. While the Tugendhats had publicly defended their commission, Farnsworth, in the middle of a protracted legal battle with Mies, provided the press with a less fulsome review of her new house. She was often "vociferous in her praise of the house," but she also complained about the inflexibility of the space and the practical difficulties of living in a home with glass walls.⁷¹ The article predictably included her more negative assessments. Six months after its publication, Gordon

⁶⁹ See the Carl Mackley Houses in Philadelphia, or Westfield Acres in Camden NJ as examples. Jersey Homesteads, designed by Alfred Kastner, is another example of International Style modernism in the New Deal. Constructed to house a cooperative community of Jewish garment workers and farmers, as a part of a program to decentralize industry and bring people into contact with the land, the exposed concrete walls and flat roofs of the houses attracted considerable attention and criticism from the popular press. This unfamiliar style, taken with the cooperative nature and ethnic character of the residents, became part of a larger argument that conflated this architecture with hostile political forces.

⁷⁰ Elizabeth Gordon, "The Threat to the Next America." *House Beautiful* 95 (Apr. 1953): 126.

⁷¹ Letter, Philip Johnson to Mies van der Rohe 4 Jun. 1951. Held at MoMA archives.

further explicated her stance in regard to Mies and the other European modernists working in America. "... (A) profound choice faces us today. Either we choose the architecture that will encourage the development of individualism or we choose the architecture and design of collectivism and totalitarian control... America and the Western world if not the whole world, is at a fateful fork in the road."⁷² With this alarmist language, *House Beautiful* transformed the Farnsworth House from a simple rural retreat into a symbol, an initial skirmish in a worldwide cultural war that threatened to undermine life, liberty and the pursuit of happiness.

PART II. ARCHITECTURAL INFORMATION

A. General statement

1. Architectural character:

Remarkable for its modernist distillation of residential needs, the Farnsworth House essentially consists of three hovering planes, supported by four pairs of columns extruded from the earth, set above their site along the Fox River. The lowest plane is the lower terrace, approximately two feet over grade, offset from the main bulk of the building. Two feet four inches above the lower terrace, the floor and roof of the main house compose the heart of the structure, with an open terrace on the west and glazing enclosing the eastern section.

Approaching from the south, one encounters a floating set of travertine treads, leading up to a broad terrace. Supported on three pairs of steel wide flange bents, offset from the main bulk of the house, this terrace has the effect of breaking up the composition of the building, of enlivening the formal symmetry and reaching into the landscape. A second set of travertine stairs leads up from the lower to the upper terrace and the main portion of the house.

Three bays wide and a single bay deep, four pairs of steel wide flange columns support the floor and the roof but also stand free of these elements, as if they have come together in graceful agreement, rather than in structured hierarchy. This joining visually reinforces the columns, which might have been lost to the strength of the deep horizontal floor and roof planes that extend one quarter bay beyond the columns on the east and west. Welding edges have been sanded away, leaving behind the pure, hard-edged steel forms. All steel elements are white-coated, their uniform, ideal form and hue contrasting sharply with the variegated shapes and shades of nature surrounding them.

At the upper level, the western bay remains open, while floor-to-ceiling glass panes enclose the three eastern bays -- the interior space of the home. Each pane is one half the width of a bay, with a narrow vertical muntin set at the mid-point. From the upper terrace, a right hand turn brings the visitor to paired glazed, unpainted aluminum doors leading into the main house. The travertine slips seamlessly below the door, composing the flooring of the interior space as well. Once inside the house, a simple core at the center

⁷² Gordon, "Does Design Have Social Significance?" *House Beautiful* 95 (Oct. 1953): 230.

provides program without demising the space, creating a single, flowing room. The interior finishes establish a muted palette of colors, with white structural elements, beige travertine, blond primavera and a small amount of dark brown teak. The coordinated, restrained hues allow the viewer to see through the interior, to the brilliant, shifting colors of the natural world outside, from the bright greens of spring and summer, to the oranges of autumn, to the stark blacks of the dormant winter woods. On the exterior, the Farnsworth House draws its compelling power from the contrast between its machined perfection and the irregularity of its setting. From the interior however, the built elements fall away, becoming a backdrop for the ever-changing show of nature beyond. As both a foil and a viewing platform, the Farnsworth House depends critically on its relationship to its site.

2. Condition of fabric:

Good to fair. Farnsworth owned the house for the first twenty years of its life and so there was little significant maintenance work required during her tenure. Many of her additions and changes, including the screens at the upper terrace and the roll-up window shades, were not judged by others not particularly sympathetic to Mies' vision. Second owner Palumbo maintained the building at great expense and with (what he believed was) a fidelity to the architect's intent.

Beyond the footprint of the house, however, Palumbo did significantly reshape the site, commissioning landscape architect Lanning Roper to transform the house from a pavilion set in natural prairie, into the largest in a collection of modern sculptures, within a pastoral English garden. Palumbo removed the sculpture upon the sale of the house. The house now stands in a grassy, flower-seeded glade, with a heritage grove surrounding it on the east and west. Since taking ownership in 2003, the National Trust for Historic Preservation has struggled to meet the costly maintenance demands on the house and site, and the increasingly frequent flooding has placed further pressure upon the organization. The Roper landscape is quickly being lost due to a lack of maintenance.

In 2010, the building is in generally stable condition and is set to receive its second new roof, but there are several systemic problems under investigation. Paint is failing at the window sills, rust at the floor plane is expanding and moving the frame out of plum, and the terrace drains are clogged so the stone terraces remain wet throughout the year. The National Trust is working with structural engineers to carefully dismantle the southwestern corner of the house and a portion of the terrace in order to investigate these issues and develop solutions. A fall 2008 flood stained interior panels and doors, and the teak wardrobe has been removed, pending a resolution to the flooding issue.

B. Description of Exterior:

- 1. Overall dimensions:** The open lower terrace plan is fifty-five feet three inches by twenty-two feet eight inches and it stands about two and a half feet above grade. The upper level, in total, is seventy-seven feet three inches wide and twenty nine feet four and one-half inches wide. The enclosed area is fifty-five feet eight inches wide and the open terrace is

twenty-two feet wide. The upper portion stands over five feet above grade, and is twelve feet seven inches high, placing the top of the parapet around eighteen feet over grade. The central proportions of the upper level are slightly thinner than the Golden Section, slimming the robust, ideal proportions of the Renaissance.

2. **Foundations:** The eight steel columns supporting the main house appear to simply emerge from the surface of the earth, as purely as an idea. It has not been possible to locate drawings of the footings, but the steel columns are likely attached to reinforced concrete piers below grade.
3. **Walls:** The house does not have conventional exterior walls, rather panes of plate glass set into customized steel frames plug-welded to the structural columns.
4. **Structural systems:**

Main level framing: Although the structural system defines the form of the Farnsworth House, more than simply exposing the system, Mies and the artisans constructing the building perfected these machine-made elements, using painstaking handcrafting techniques to erase the imperfections of the industrial materials and their attachment, in order to achieve a more Platonic appearance. At the roof and floor of the main house level, twelve twelve-inch steel wide flange joists span the (north to south) width of the house, bearing on fifteen-inch deep steel channel beams that run around the perimeter of the building. The roof and floor planes are welded to the four pairs of eight-inch steel wide flange columns. Bolts or rough welds serve at the concealed joints in the structure, but the exposed attachments at the columns (and at sills and other locations) are achieved through a painstaking process of plug welds. The pieces were temporarily attached by bolts or cleats, and then permanently welded at drilled holes. The bolts and cleats, along with any excess welding material were then burned and sanded away. Three coats of paint further erased the rough edges, leaving only the perfected form of the steel, as if the entire house was cast as a whole, rather than assembled on site.

Lower terrace framing: Although the lower terrace could have used smaller members, it largely replicates the main level structural system, but is offset to the west. Supported by three pairs of columns, on the north side, the lower terrace floor system is welded into two of the columns of the main house, with a shortened column on the western edge. On the southern side, all three supports are shortened eight inch steel wide flange columns that, as on the main house, rise to a point just below the top surface of the floor system, emphasizing the coexistence, rather than hierarchy of the structural members. Both the upper and lower terraces are finished with 1-1/4" travertine panels with open joints. Within the floor system, between the joists, lightweight concrete fill is cast in an inverted pyramid, with a brass drain at the center of each bay. A waterproof membrane lines the opening, with crushed stone above. This allowed drainage for water seeping through the open joints of the travertine.

- 5. Openings:** Although overwhelmingly glazed, the house has only two operable openings. A pair of glazed aluminum doors slightly offset from center on the west façade admits entry to the house, with a single aluminum door handle on the northernmost leaf. Each outswinging on three ball-bearing pivot hinges, the doors are secured at a lockset, and with a pair of friction door holders at the interior bottom rail, locking the system into place. On the east façade, two hopper windows occupy the lower portion of the center windows. An aluminum handle unlocks each mechanism and the steel windows pull in, controlled by a metal slider system and an extension arm. The windows and doors are more or less parallel, allowing for some cross-ventilation through the house.
- 6. Roof:** The roof joists are topped by precast concrete slabs. A steel angle (cut from a five inch wide flange), is welded atop the steel channel that forms the perimeter of the roof assembly. A two inch by two inch angle is attached to the larger steel angle, anchoring the roofing in place. This added depth allows for the creation of a sloping curb at the perimeter of the roof. The roof was originally covered by a vapor seal membrane and two inches of foam glass insulation. Four-ply felt covered the insulation, with lead flashing, felt strips and pitch and gravel roofing above. This material has since been replaced with more modern materials. Water drains into a central, internal rainwater leader, which exits through the central core below the house. The low parapet also obscures a low roof top service core that includes a water tank, boiler, air conditioner, chimney stack, the internal downspout and exhaust fans.

7. Other exterior features:

Stairs: A set of four travertine treads leads from the ground on the south façade up to the lower terrace, and a second set of five treads rises from the lower terrace to the upper terrace. Rather than a conventional riser-tread arrangement, the travertine risers are mounted on a steel T, which is affixed to the stringer bar. This has the effect of visually floating each of the treads. Each tread has a 1/8" radius at the top of each tread, while other edges are straight-cut. At the lower set of stairs, the stringer was not anchored to the ground originally, rather simply cantilevered off the terrace beam. Palumbo, fearing that the foot traffic of a museum occupancy would damage the rather delicate stair, added a temporary stair at the west side of the lower terrace to accommodate tours. When the National Trust took ownership, they laid a new concrete slab beneath the stair and anchored the stringer to it in order to improve the strength without altering the appearance of the stair, allowing visitors to follow the designed entry sequence.

Central core: Visually levitating over its site, the Farnsworth House concentrates its utilities in a cylindrical shaft below the building. Set a bit north of center but several feet from the perimeter, the core is more or less even with the black sugar maple, allowing it to become lost in the shadow of the upper terrace.

C. Description of Interior

- 1. Floor plans:** As a weekend retreat for a single woman, Mies recognized an opportunity to

create an interior that reduced program, and thereby built elements, to a minimum. Within the enclosed space, a primavera-clad central core organizes the spaces without introducing any real divisions, enforcing a sense of openness throughout the house. North of the entry, a table and chairs define the dining area, with direct access to the strip kitchen on the north side of the core. A desk stands south of the doors, and space flows uninterrupted to the living room along the south side of the core. A free-standing teak wardrobe originally formed the eastern end of the living room, blocking the view through the eastern windows, and providing privacy for the bedroom east of the core.⁷³ The bedroom area on the east side of the house is irregularly defined by the core, wardrobe and eastern wall of the house, with an open passage to the kitchen on the north side.

A door on the west wall of the core leads into the guest bathroom, with the toilet, sink and shower to the left, and a waist-high shelf on the right. A door on the east wall of the guest bathroom (within the shower enclosure) leads into the small mechanical room.

A door on the east wall of the core leads into the master bathroom, with the toilet, sink, full bathtub/shower on the right, and a waist-high shelf on the left. The kitchen, with primavera upper cabinetry, an aluminum countertop, steel lower cabinets, paired below-counter refrigerator and freezer, sink and oven, occupies the north side of the core.

- 2. Flooring:** The floor throughout the house and terraces is finished with one and one quarter inch thick travertine. Cut into blocks two feet nine inches wide and two feet deep, edges are coordinated to match architectural boundaries. The material flows continuously between interior and exterior, between the main space and both of the bathrooms. At the interior, the subfloor is equipped with radiant heating. The guest bathroom shower is finished in travertine, set approximately one inch lower than the main floor level and sloping down to the drain. In the master bathroom, the travertine stops at the edge of the enameled bathtub. The interior mechanical space has a bare concrete floor.
- 3. Walls:** Exterior walls are quarter-inch thick polished plate glass, set into the steel frame of the structure. The interior core is composed of wood-framed walls, with primavera veneer panels. The core is only eight feet high, stopping one foot five inches below the ceiling, increasing the impression it is merely an object within the larger, room, rather than a demising element. A service flue, set back from the edges of the core and above the service core below the house, does rise the full height of the space, accommodating venting, drainage and other utilities. Lighting and security cameras have been added above the core.

On the south side of the core in the living room, the upper wall is finished with primavera panels, while the lower two feet eight inches is a continuous inset, with the fireplace at the

⁷³ According to his associates, Mies intended to design a low wardrobe that could accommodate storage but also maintain the view through the eastern windows, but Farnsworth demanded full-height hanging space. This quarrel was cited as a part of the deteriorating relationship between the two. The full-height wardrobe was ultimately designed and installed. The wardrobe was removed from the house following in the 2008 flood, and is currently in a restoration storage facility.

center. Finished with travertine on the floor, wall and top (the wall and top are the back side of the bathroom shelves), the cove has a raised travertine slab at the fireplace, with a stainless steel firebox behind. The original fireplace lacked a raised slab and proved messy to use. At Palumbo's request, Dirk Lohan added the travertine slab, which matches the floor and includes a smooth-edged inset carved in the center.

In the bathrooms, the waist high shelves are clad in travertine (the rear of the fireplace inset). Plaster or gypsum board panels, with metal trim, finish the walls. Chrome, wall-mounted towel bars and a mirror finish the space. The interior mechanical room is finished with asbestos cement panels on the walls and ceiling to improve fire resistance.

- 4. Ceiling:** In the main space of the house, a metal lath and plaster ceiling is suspended from the steel roof joists. A curtain track mounted to the ceiling wraps around the perimeter, and the system is edged with a c-channel, with a small reveal between it and the steel structure. In the bathrooms, the ceiling, seven feet ten inches above the floor, is also finished with plaster or gypsum board, with a narrow reveal at the wall edge. The mechanical room is open to the roof structure above.
- 5. Kitchen:** The north side of the core houses the kitchen. Primavera-clad cabinets occupy the upper portion of the space, along the entire length of the core. These shelves are typically paired, and one cabinet west of center is occupied by the vent hood for the cooktop. At both ends, taller primavera-clad cabinets flank the kitchen space, while a seamless stainless steel countertop spans the space between them, including the sink and the cooktop. Two undercounter refrigerators stand on the eastern end of the kitchen, with steel undercounter cabinetry adjacent. The refrigerators are new, but closely match the originals in size and exterior appearance. Below the sink, a large louvered vent provides air circulation for the mechanical space behind, with the oven and more drawers to the west. All undercounter fixtures are finished with white enameled steel or a similar finish. An original metal exposed fluorescent fixture is mounted to the underside of the upper cabinets, over the sink.
- 6. Original furniture:** Mies designed the teak wardrobe, considerably darker than the core's blonde primavera. The closet is twelve feet long, two feet two and one-half inches wide, and just under six feet tall. Much like the core, it both functions to hold items and also to control space, forming the end of the living room and providing privacy for the bedroom area beyond. Paired hanging closets occupy the ends of the wardrobe, with a stereo cabinet at the center. The closets open to the east side of the piece, and the stereo cabinet opens to the west (as the wardrobe was typically sited in the space).

It is believed that Mies intended to design furniture for the house, planning for untreated leather on chrome pieces that were "a bit less elegant" than his typical pieces. This furniture, however, was never designed, and Farnsworth refused to pay for a pair of Barcelona Chairs and a coffee table Mies ordered for the house. Farnsworth furnished the house herself. When Palumbo took possession, he acquired a number of Mies-designed pieces; including a smoked glass table, a chrome and leather daybed and three stools

designed for the Barcelona Pavilion; five chairs designed for the Tugendhat House; a chaise lounge; eight dining chairs; and a small side chair. Palumbo also commissioned Lohan to design several pieces, including the dining table, desk, foot locker and platform bed. Although he removed his outdoor sculpture, Palumbo left his furniture with the house upon its sale.

D. Outbuildings: The primary outbuildings and landscape features individually documented in this project include: the boat house, swimming pool, garage, visitors center, Rob Roy Bridge, and Ipe Bridge. They comprise a varied collection of buildings and structures and are sited primarily for function and invisibility from the house.

Boathouse (IL-1105-A)

As the only building constructed within sight of the house, the boathouse is architecturally distinguished. Its joinery is emphasized in a way that complements the house, while its placement emphasizes a close connection with the site, in contrast to the house. The boathouse, the most interesting of the post-Mies structures, is a single chamber, accessed from a concrete stair on the north side. A dock wraps along the north and west walls and a narrow channel leads out to the river on the south. The water level in the building rises and falls with the river.

The footprint of the boathouse measures 41'-8" x 21'-8" with a 10'-wide raceway extending about 60' to the river's edge. Although the ridge of the boathouse roof stands only 6'-8" above its foundation, the structure extends more than five feet below grade. Silting makes it impossible to determine the depth of the concrete channel of the raceway. At the boathouse, steel angles connect 4" x 6" wood posts to the 10" thick, cast-in-place reinforced concrete foundation walls. These posts support modified scissor-trusses, and exposed bolt attachments draw attention to the process of joinery, in contrast to the house, which erases its joints.

Although open to the air, the boathouse has metal gates at the north and south ends to secure the boats once housed within. The gates are composed of vertical steel, square sections at 6" on center. The same sections continue beyond the fenestration to enclose the gable ends, and the narrow space between the sill and roof on the long east and west facades. On the north side, a tall, narrow swinging gate fits within the gabled roof line and leads into the dock space. This gate swings on surface-mounted flag hinges and is closed with a simple hasp lock, with no knob or lockset. On the southern, river side, a wide pair of gates swing open on flag hinges to allow boats to access the river. Rather than a padlock, these gates are secured with a large rotating latch that resembles a ship's wheel and is the only elaborate element in the boathouse, clearly the design focus of the simple, but immaculately-detailed structure.

The boathouse is in poor condition. It has been abandoned since Palumbo sold the house in 2003 and frequent flooding, which often fills the meadow without rising to the level of the house, means that the structure is submerged several times a year. Log jams often build up against the west side of the roof, placing undue loads on the structure. Several feet of silt have clogged the main channel leading to the river; the sill plate of the structure is severely

rotted and completely missing in sections; and the wood shingle roof is extremely deteriorated.

Swimming Pool (IL-1105-B)

The swimming pool measures 21' x 36' and is asymmetrically set within the surrounding 54' x 39' deck with narrow 6'-wide segments along the east and west edges and wider 12' decks along the north and west sides. The swimming pool is constructed of reinforced concrete and the deck is covered in 3'-square green slate tiles.

The swimming pool is in fair condition. It is no longer in use, and it is unknown whether the chlorination and filtration system would be operable if restarted. The pool previously had collected rainwater and organic material, but was recently cleaned out, and partially refilled and covered.

Garage (IL-1105-C)

The garage is a simple, conventional structure built to house Edith Farnsworth's car, and modified to improve Peter Palumbo's recreation facilities. In plan, the garage measures 31'-4" x 24'-3/4". The ridge of the gable roof, composed of uncomplicated collared trusses, stands 15'-6" above the foundation. The wood frame building is sheathed in vertical board-and-batten siding that appears to be set on a poured-in-place reinforced concrete slab foundation rising 6" to 18" above grade.

A metal, roll-up garage door in west wall of the garage provides access to the main garage space. An elaborate paneled system on the south wall suggests a window once looked out toward the house while paired wood doors lead into a shelf-lined utility closet. A single board-and-batten-door in the east wall matches the siding and leads into the sauna space, while a seam-trace suggests that a larger opening once existed. A windowed access door in the north wall opens onto the meter closet.

The garage is in good condition. Palumbo added a room on the east side of the building containing a sauna, sink, toilet, and shower associated with the nearby swimming pool and tennis court. The room is accessed via the single door in the east wall. This section, finished entirely with cedar, is largely unused today, but the roof has been maintained and the main garage is actively used for equipment storage.

Visitors' Center (IL-1105-D)

Palumbo purchased a prefabricated metal gabled-roofed structure to serve as the visitors' center. In plan, the building measures 72'-2" x 24'-0" with the ridge of the roof rising 19'-6" above grade. The visitor center is a steel-framed structure set on a simple concrete slab foundation. Its corrugated steel siding mimics board-and-batten sheathing. Earth-tone aggregate surrounds the building and a dark concrete tile walkway extends from the front doors, past free-standing slatted walls set about ten feet east of the building, and passes through a wide, light concrete tile deck abutting the graveled parking lot on the east.

At the visitor center, paired, glazed metal doors at the center of the east wall lead into the building. On the south wall there is a single metal-paneled door west of the center line. Two sliding windows in the west wall light the office space. There are no openings in the north wall of the visitor center. The building is finished with gypsum board at the interior.

The actively-used visitor center is in good condition. In consult with Landmarks Illinois, the National Trust for Historic Preservation made interior changes after it acquired the property. Through the main doors on the east, visitors now enter the gift shop and ticket sales area, with an enfilade corridor running along the south wall. A small theater is positioned next to the gift shop, with a pair of restrooms beyond. A storage closet is located next to the bathrooms, and the corridor terminates at a door leading into the office, which is a two-room suite along the west wall of the building.

Rob Roy Bridge (IL-1105-E) and Ipe Bridge (IL-1105-F)

Both the Rob Roy Bridge and the Ipe Bridge are simple, effective structures and are in good condition. The Rob Roy Bridge with a 45'-long span is the more substantial of the two structures. A cambered steel pratt truss supports ipe decking and is anchored to concrete abutments on either end. The top chord of the truss also serves as the handrail for the bridge, with steel angles attached to the outside of the truss to bring it into compliance as a guardrail. The National Trust for Historic Preservation added new, rot-resistant ipe decking to the Rob Roy Bridge ca. 2003. The National Trust built the short Ipe Bridge (footbridge) to replace the eyebrow bridge that Palumbo added when he opened up the parking lot to the east of the site. The short, Ipe Bridge is a curbless 14'-long wood deck of the eponymous material, 7'-4" wide, on concrete abutments.

Other site features:

Tennis court

The tennis court (121' x 61') is in fair condition. Nets and fences have been removed, and weeds are growing up in cracks in the surface. The tennis court is simply an asphalt slab one hundred and twenty one feet by sixty one feet in plan, with a net at midpoint.

Site fence

Edith Farnsworth surrounded her original seven acre site on three sides (the river forms the fourth side) with a simple wire fence mounted on ground-sunk posts. A wide gate near the garage was the only access for cars or pedestrians. The fence was expanded with the purchase of the acreage to the east, and Palumbo added an eastern auto gate to access his new drive. When the property opened to the public in 1997, another gate was opened up at the visitor center. Although there are no records, it is likely that over time, Farnsworth's original fence has been replaced in its entirety. All of the owners have complained of people breaching the fence to view the famous house. Maintaining security where the fence meets the river is particularly difficult, as floods frequently undermine fence posts and log jams fell entire sections of fencing. On at least one occasion, a car has run off the road and torn out a wide swath of fencing on the north side.

Utility hub

Between the house and the garage, but above the meadow, and largely invisible from the house, power and meter fixtures are set into the landscape, mounted on an L-shaped shield wall with flush horizontal paneling.

Trees

The eastern section of the property is actively farmed and has trees only along the northern fence and the southern river border, but Palumbo planted a significant grove of specimen trees between the visitor center and the house on the western, original, portion of the site. Most significant is the black sugar maple that stands at the crook of the house. One of the largest of its kind in the county, Mies situated the house in relationship to this existing tree. Critical to the composition of the site, in 2010 the tree has reached its natural lifespan and now threatens the house. There are many other valuable trees on the site, both native examples and those added by Palumbo and Roper. Beavers threaten these trees, so they are currently protected by wire mesh at their bases, but several trees have outgrown their mesh rings and are now constrained by them.

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Sources Yet to be Investigated

The records of Michael Reese Hospital may provide additional information about Edith Farnsworth's career and her knowledge of their replanning project.

Archaeological and excavation work would reveal subsurface foundation conditions.

PART IV: PROJECT INFORMATION

The Farnsworth House was documented by the National Trust for Historic Preservation during the spring and summer of 2009, and submitted to the Historic American Buildings Survey (HABS) in the fall of 2010. HABS is a part of Heritage Documentation Programs (HDP), a division of the National Park Service under the direction of Richard O'Connor, Chief. The National Trust sponsored the project to document the Farnsworth House, which was led by Barbara Campagna, the Graham Gund Architect of the National Trust. Elizabeth Milnarik served as project leader and historian. The measured drawings were completed by National Trust employees Jenna Cellini, Elizabeth Milnarik, and Brad Roeder. Leslie Schwartz produced the large-format photographs.