THE 20TH-CENTURY ARCHITECTURE OF FRANK LLOYD WRIGHT

Nomination to the World Heritage List by the United States of America (2016) Revised 2019

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FRANK LLOYD WRIGHT BUILDING CONSERVANCY

FOREWORD

The Frank Lloyd Wright Building Conservancy is honored to present this revised document, *The 20th-Century Architecture of Frank Lloyd Wright*, as a nomination for inscription to the World Heritage List. As the only organization with the mission to facilitate the preservation and maintenance of the remaining structures designed by Frank Lloyd Wright, this nomination is one of the most important shared endeavors we have undertaken.

After the World Heritage Committee's referral decision in July 2016, the Frank Lloyd Wright World Heritage Council worked closely with the United States National Park Service and, through them, with ICOMOS, to seriously consider their comments and use them to make appropriate changes to the proposal.

This dossier represents a strong collaboration between the eight Wright component sites and a group of established Wright scholars, including the Conservancy's current and former Board members David DeLong, Neil Levine, Richard Longstreth, and Jack Quinan. We thank representatives from each site who contributed their time and knowledge to this project. We are enormously grateful to Lynda Waggoner and Scott Perkins (both of Fallingwater), Jeffrey Herr (Hollyhock House), and Stuart Graff (Frank Lloyd Wright Foundation) for their contributions to writing the revised sections, and to the invaluable guidance of Phyllis Ellin and Stephen Morris of the Office of International Affairs at the National Park Service.

Edith Payne
President

Barbara Gordon
Executive Director

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INTRODUCTION

Changes made in response to the World Heritage Committee's 2016 Referral Decision and after Consultation with ICOMOS

How to Identify the Revised Parts of the Dossier

The revised parts of the dossier are indicated by green triangles in the lower right- or left-hand corner of the affected pages. The changed text (either the whole page, paragraph, or individual sentences) is highlighted in green. Other parts of the dossier have been edited to streamline the text and update, clarify, and correct minor errors and inconsistencies.

Composition and justification of the series

- Two of the components of the original series, Price Tower and the Marin County Civic Center, are no longer included, leaving eight components.
- Only criterion (ii) is now proposed as justification [criterion (i) was dropped at the suggestion of ICOMOS].
- Six additional buildings have been identified as possible future extensions to the series. These would include an example of a textile block house, two additional Usonian houses, an additional example of a Prairie house, a house in Japan, and the unique S.C. Johnson Administration Building and Research Tower.
- A new historical context has been provided in Section 2.b.
- Section 3 has been revised to reflect these changes.
- The bibliography in Section 7 has been supplemented.

Boundaries

- The proposed boundaries of Taliesin West and Hollyhock House have been expanded.
- The proposed buffer zones of the Herbert and Katherine Jacobs House and Hollyhock House have been enlarged.
- Minor changes have been made to the buffer zones of Fallingwater and Taliesin.
- These boundary changes are explained in the Executive Summary and Section 2.a.

Protection and Management

- Additional information on the legal protections for the buffer zones has been provided in Section 5.c.
- New synthetic summaries of the management systems for the individual components and the overall management of the series has been provided in Section 5.c., for greater clarity and to address questions raised by ICOMOS.
- The monitoring indicators have been updated to reflect the revised Outstanding Universal Value.
- A number of supplementary documents relating to protection and management were provided following the onsite evaluation of the property in 2015. These are now listed in Section 7.b.

Photograph courtesy of the Frank Lloyd Wright Archives (Museum of Modern Art/Avery Architectural and Fine Arts Library, Columbia University, New York), 6007.0019.

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"To mention his name was shocking."

Bruno Taut, Die Neue Baukunst *(1929)*

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

State Party United States of America

State Arizona, California, Illinois, Pennsylvania, New York, Wisconsin

Name of Property The 20th-Century Architecture of Frank Lloyd Wright

The 20th-Century Architecture of Frank Lloyd Wright is a serial nomination that refers to structures designed by the American architect Frank Lloyd Wright (1867-1959), spanning the years 1905-1959 and located in six states across the United States of America.

Geographical Coordinates to the Nearest Second

NAME OF COMPONENT SITE	CITY / STATE	GEOGRAPHICAL COORDINATES
Unity Temple	Oak Park Illinois	87°47'47.767"W 41°53'18.308"N
Frederick C. Robie House	Chicago Illinois	87°35'45.053"W 41°47'23.001"N
Taliesin	Spring Green Wisconsin	90°4'12.979"W 43°8'27.962"N
Hollyhock House	Los Angeles California	118°17'34"W 34°5'0.54"N
Fallingwater	Mill Run Pennsylvania	79°27'59.312"W 39°54'20.055"N
Herbert and Katherine Jacobs House	Madison Wisconsin	43° 3' 30.8874"W 89° 26' 29.7594"N
Taliesin West	Scottsdale Arizona	111°50'44.31"W 33°36'32.834"N
Solomon R. Guggenheim Museum	New York New York	73°57'35.353"W 40°46'57.72"N

Textual Description of the Boundaries of the Nominated Property

The 20th-Century Architecture of Frank Lloyd Wright is a series of eight component sites located in six states within the United States of America. The boundaries of the eight component sites total 26.369ha. All component sites within the series have buffer zones proposed, totaling 710.103ha. For those components whose natural setting supports the Outstanding Universal Value, the buffer zones are consequently larger.

Generally, the boundaries for each component site were developed based on their respective National Historic Landmark boundaries, which are shown on the accompanying maps. Under United States law, the nominated property cannot exceed those boundaries. These boundaries were used for five of the eight components: Unity Temple, the Frederick C. Robie House, Hollyhock House, the Herbert and Katherine Jacobs House, and the Solomon R. Guggenheim Museum.

For Taliesin, Fallingwater, and Taliesin West, which are located in expansive natural settings, the boundaries are proposed to encompass the primary designed buildings and their immediate settings, while the much larger boundaries of the National Historic Landmarks contribute to the buffer zones, thus ensuring that the larger settings are protected. This is explained further in Sections 2.a and 3.1.c in response to the comments made by ICOMOS in their 2015 evaluation.

Letter Size Maps of the Nominated Property, Showing Boundaries and Buffer Zones

Global/National Map Sources:

Environmental Systems Research Institute, Great Lakes Information Network, National Atlas, National Hydrography Dataset, National Oceanic and Atmospheric Administration, Natural Earth Data, United States Census, United States Department of Agriculture, United States Geological Survey, United States National Park Service.

State Map Sources:

Columbia University, Commonwealth of Pennsylvania, State of Arizona, State of California, State of Kansas, State of New York, State of Wisconsin, Pennsylvania Spatial Data Access (PASDA), The Pennsylvania State University, Taliesin Preservation Inc., University of Arizona, University of Hawaii, University of Wisconsin-Madison, Western Pennsylvania Conservancy.

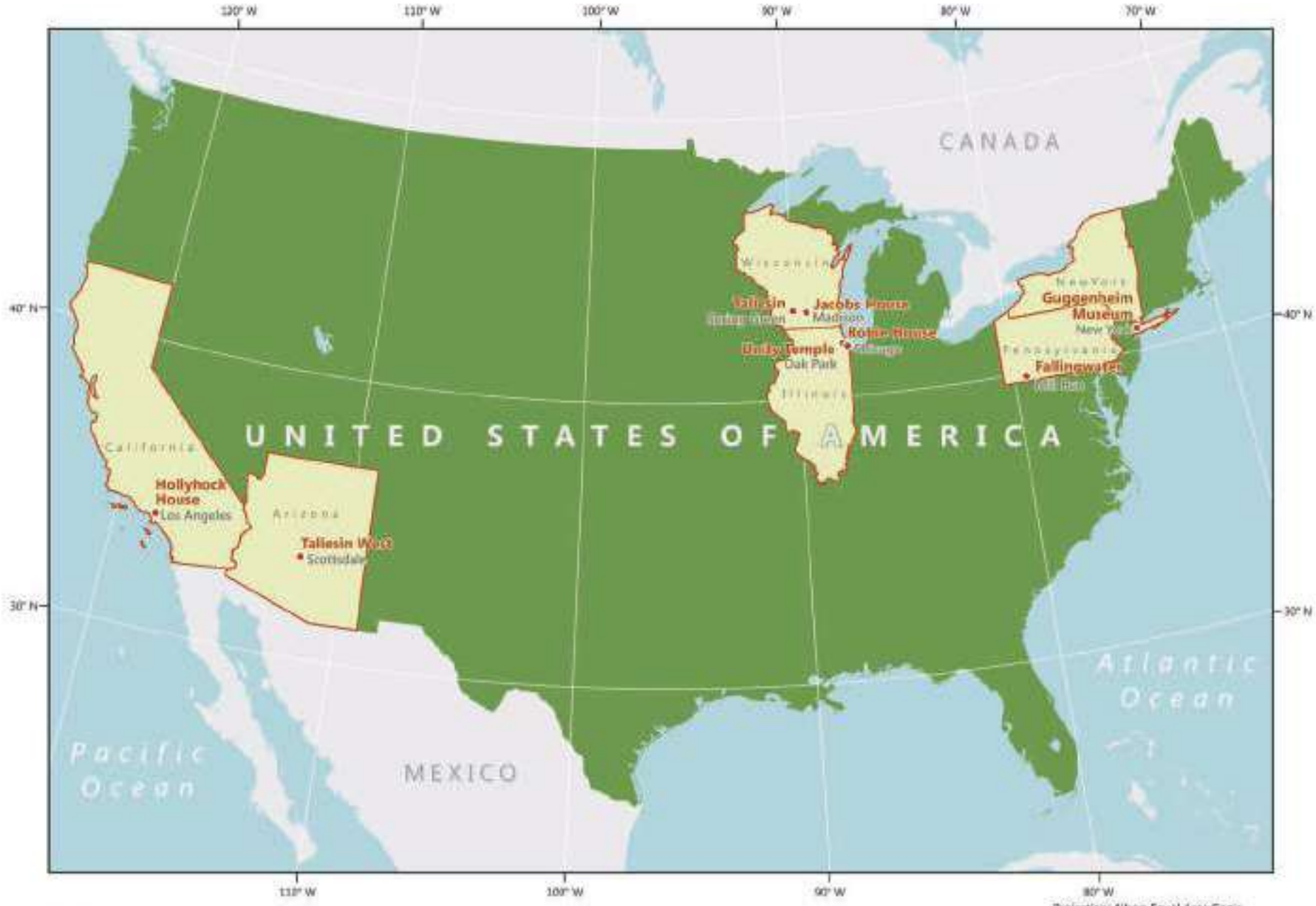
Local Map Sources:

City of Chicago, City of New York, City of Scottsdale (Arizona), Cook County (Illinois), Iowa County (Wisconsin), Los Angeles County (California), Maricopa County (Arizona).

Other Map Sources:

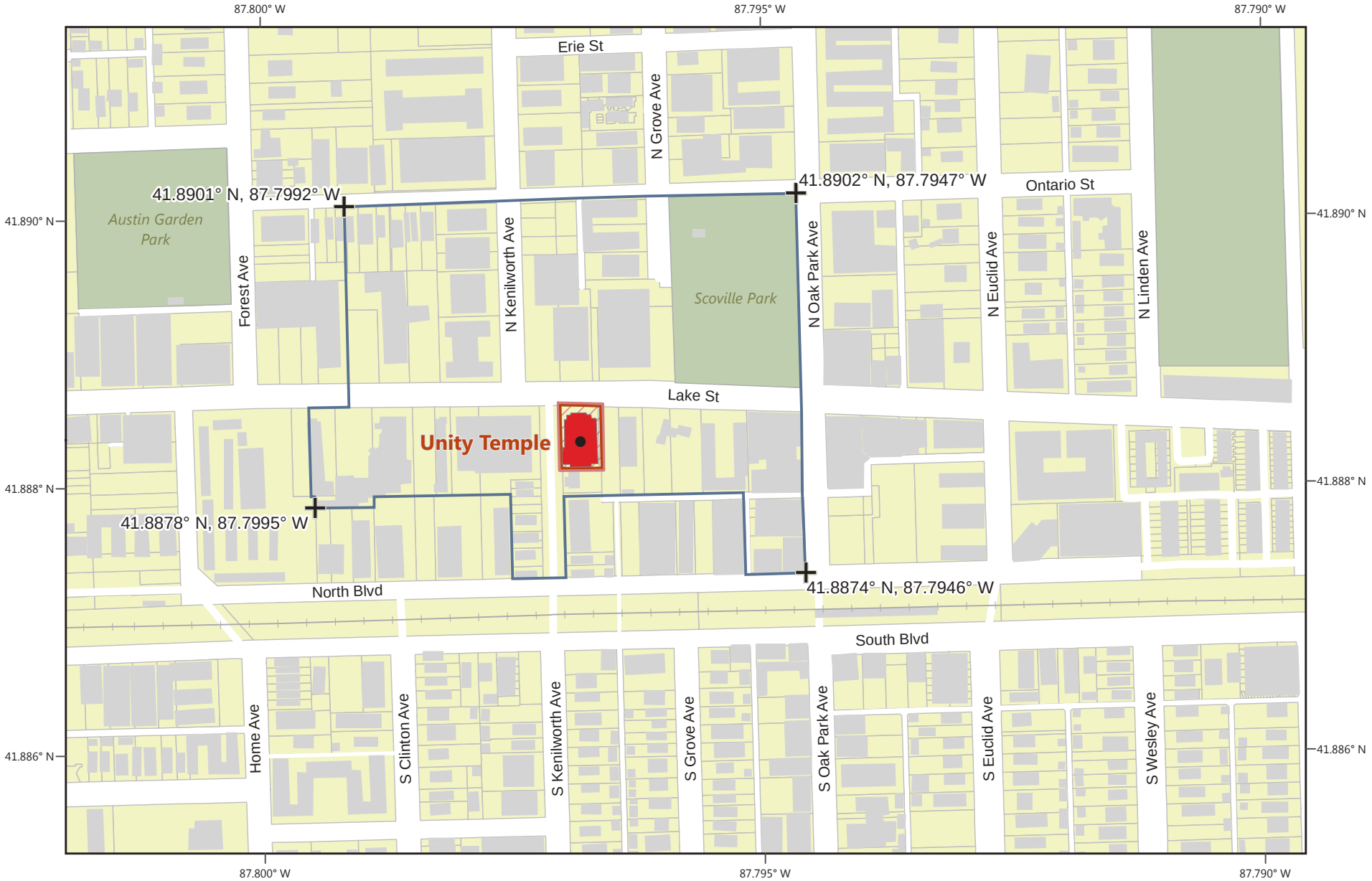
www.openstreetmap.org, www.thematicmapping.org.

The 20th-Century Architecture of Frank Lloyd Wright National Locator

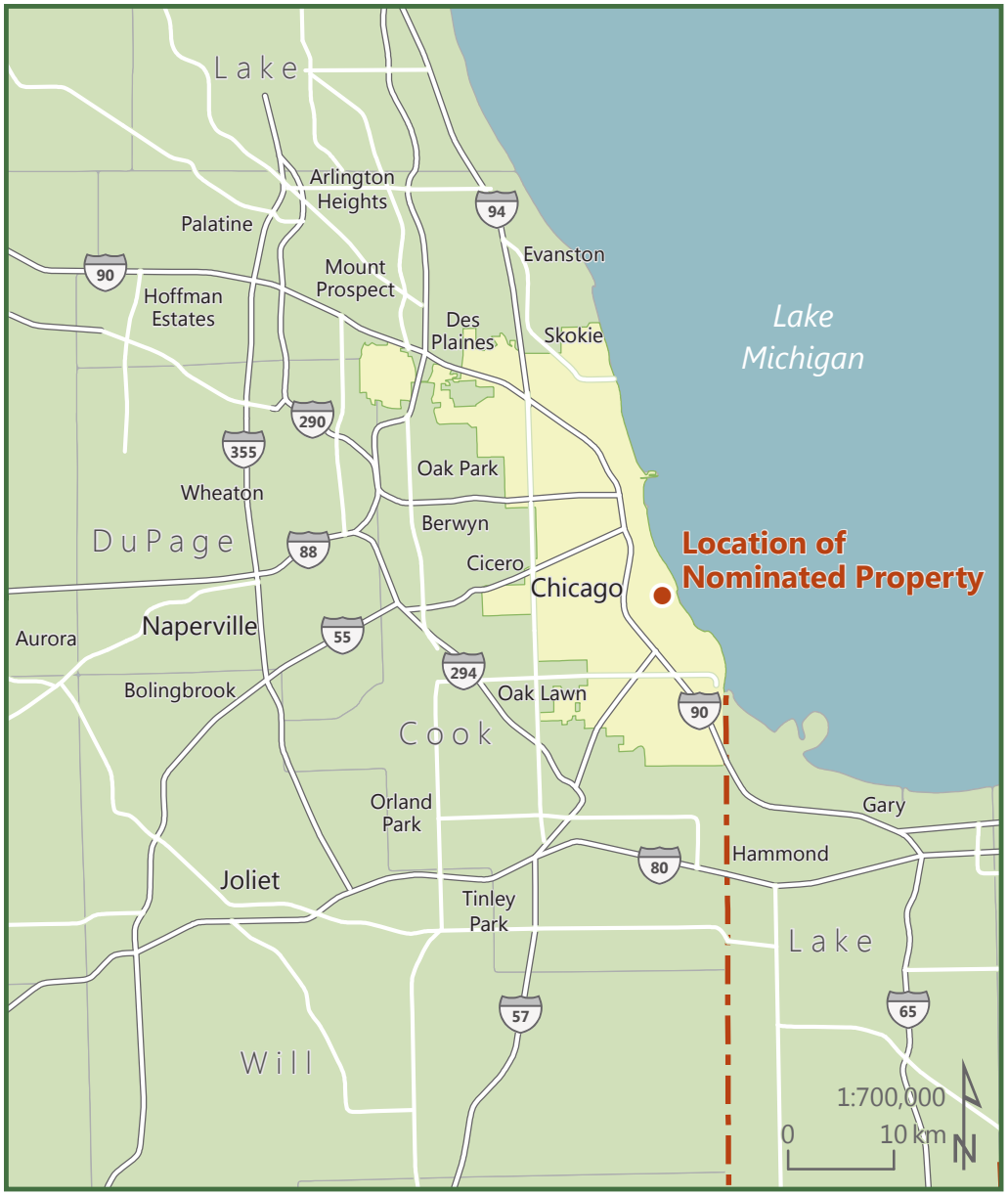


Projection: Transverse Mercator, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University

Unity Temple, Oak Park, Illinois



The 20th-Century Architecture of Frank Lloyd Wright
Frederick C. Robie House, Chicago, Illinois – Regional Locator



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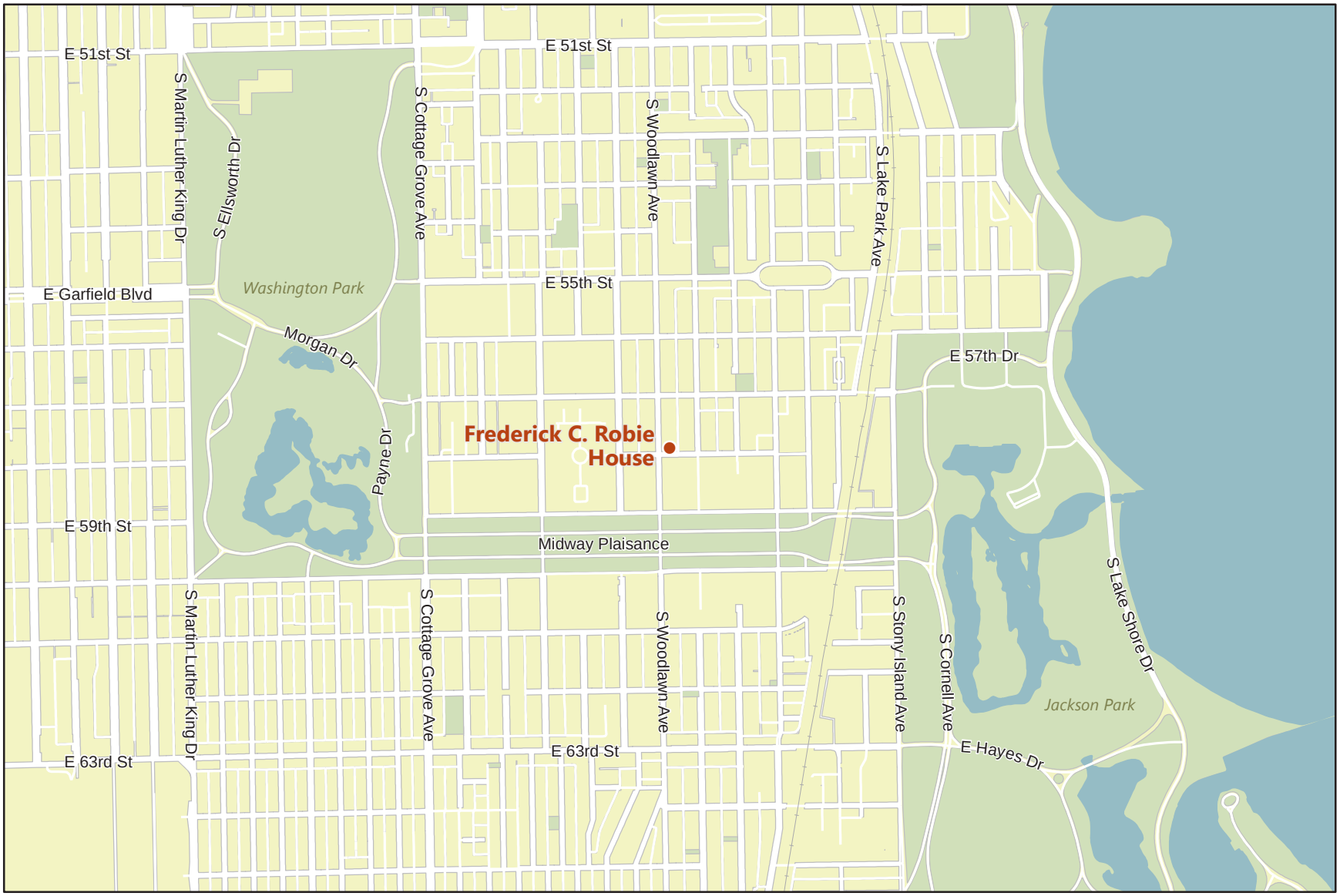
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University

The 20th-Century Architecture of Frank Lloyd Wright
Frederick C. Robie House, Chicago, Illinois – City Locator



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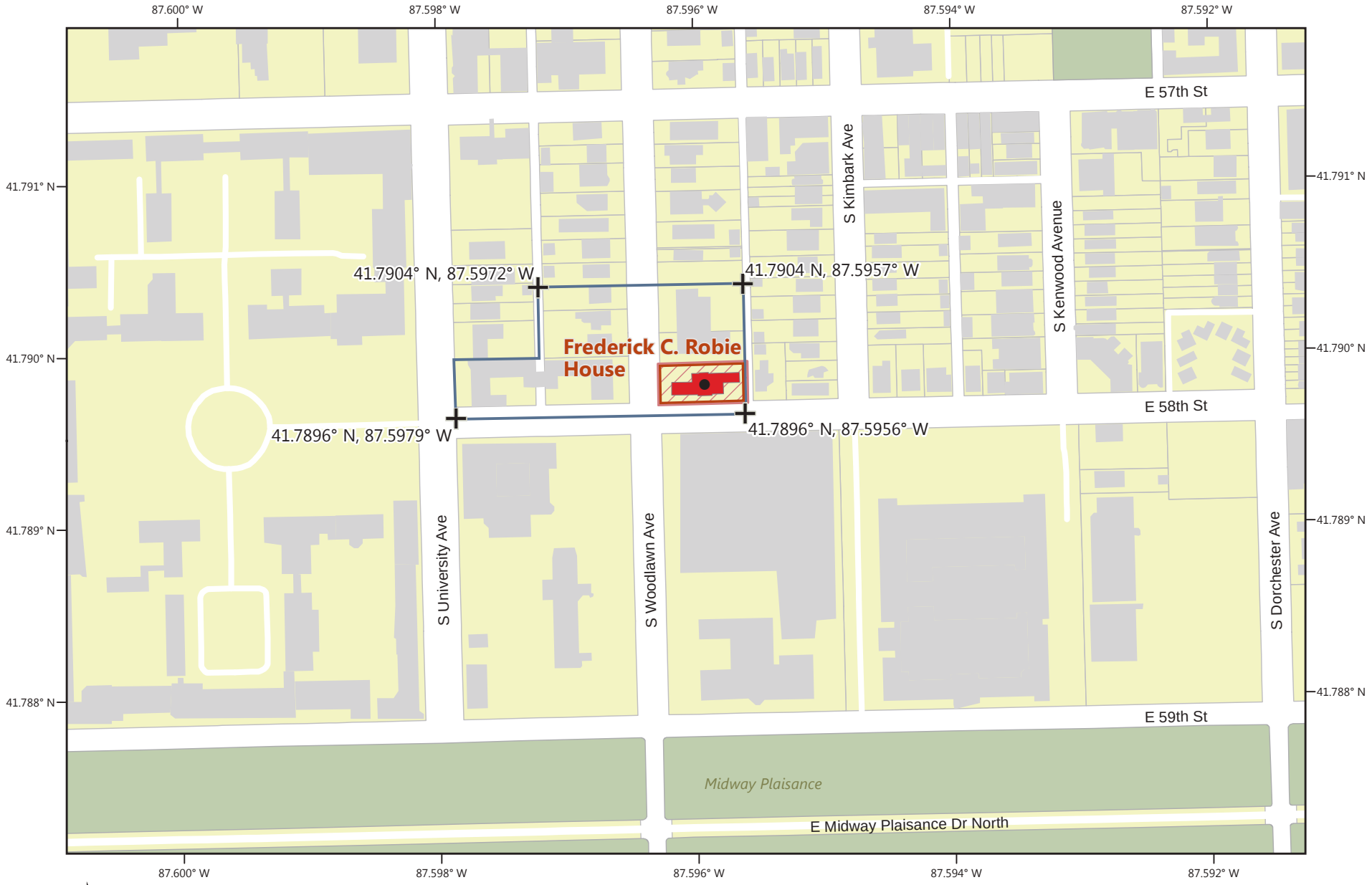
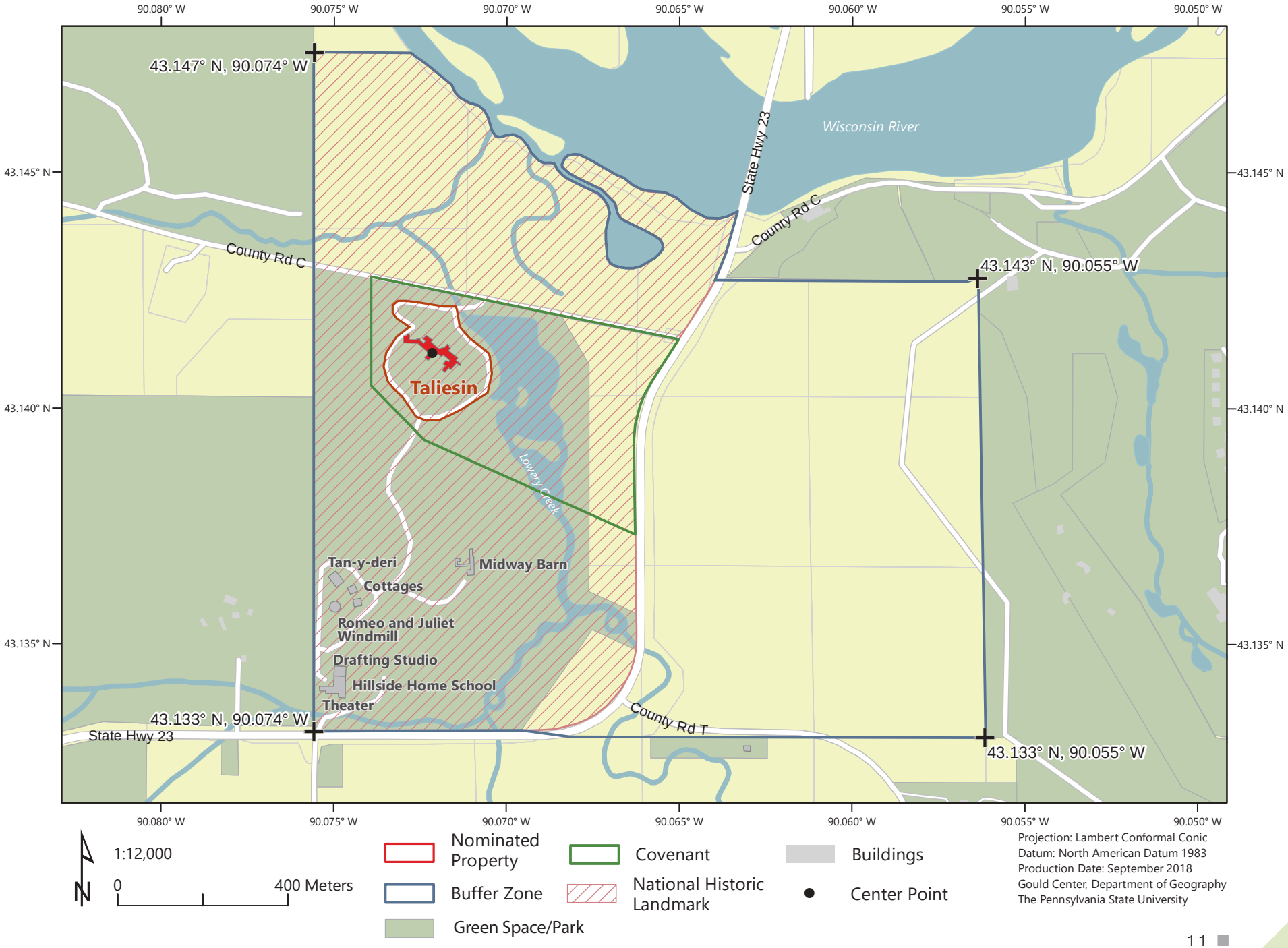
Gould Center, Department of Geography
The Pennsylvania State University

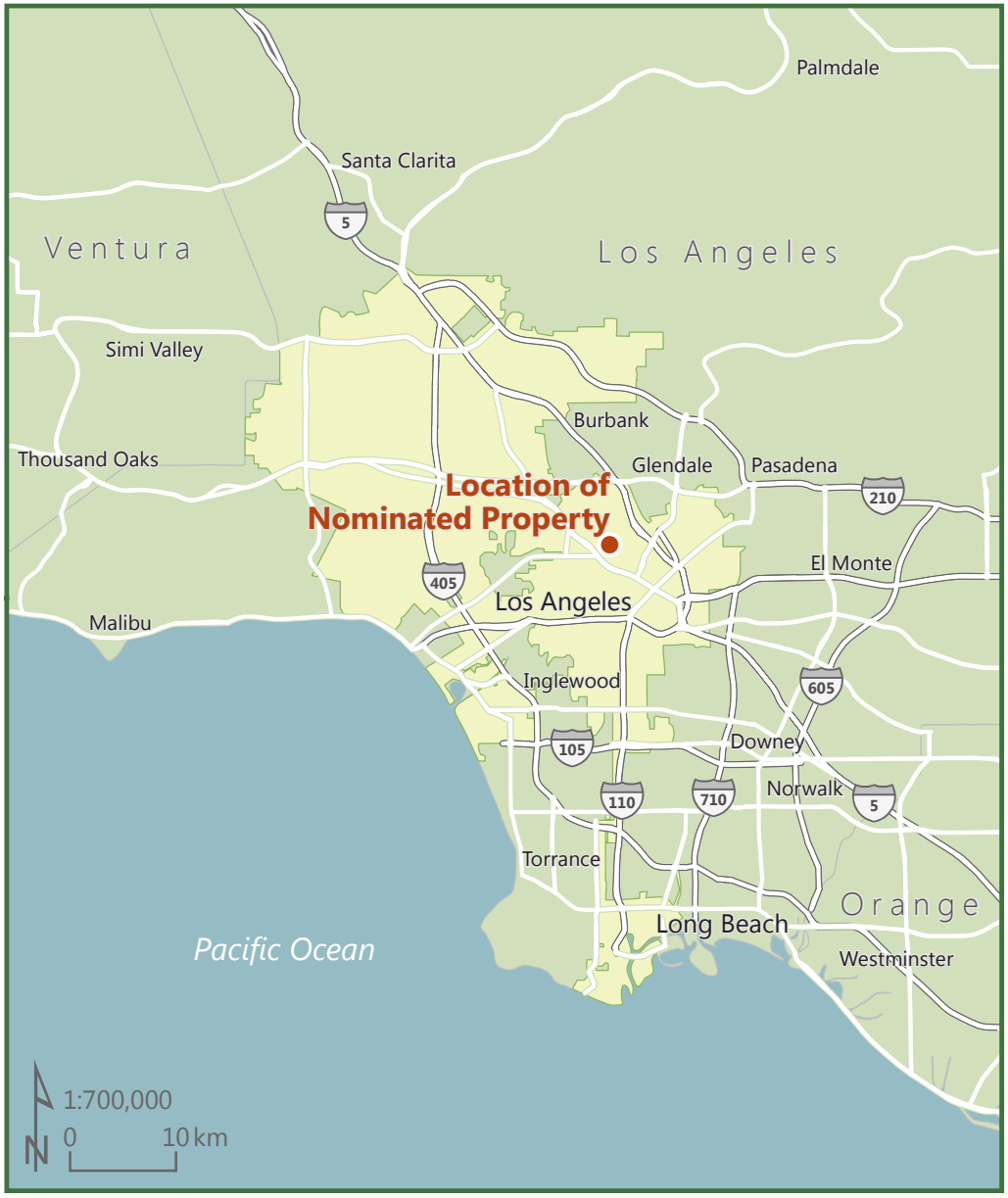

87.600° W
87.598° W
87.596° W
87.594° W
87.592° W
41.791° N
41.790° N
41.789° N
41.788° N
E 57th St
S Kimbark Ave
S Kenwood Avenue
41.7904° N, 87.5972° W
41.7904 N, 87.5957° W
Frederick C. Robie House
E 58th St
41.7896° N, 87.5979° W
41.7896° N, 87.5956° W
S University Ave
S Woodlawn Ave
S Dorchester Ave
E 59th St
Midway Plaisance
E Midway Plaisance Dr North
1:3,500
0
100 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Transverse Mercator
Datum: North American Datum 1983
Production Date: November 2015
Gould Center, Department of Geography
The Pennsylvania State University

Taliesin, Spring Green, Wisconsin – Regional Locator

Projection: Lambert Conformal Conic, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University


90.080° W
90.075° W
90.070° W
90.065° W
90.060° W
90.055° W
90.050° W
43.147° N, 90.074° W
43.143° N, 90.055° W
43.133° N, 90.074° W
43.133° N, 90.055° W
43.145° N
43.140° N
43.135° N
Wisconsin River
State Hwy 23
County Rd C
County Rd T
Taliesin
Lowery Creek
Tan-y-deri
Cottages
Midway Barn
Romeo and Juliet Windmill
Drafting Studio
Hillside Home School
Theater
1:12,000
0
400 Meters
Nominated Property
Buffer Zone
Green Space/Park
Covenant
National Historic Landmark
Buildings
Center Point
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2018
Gould Center, Department of Geography
The Pennsylvania State University

Hollyhock House, Los Angeles, California – Regional Locator



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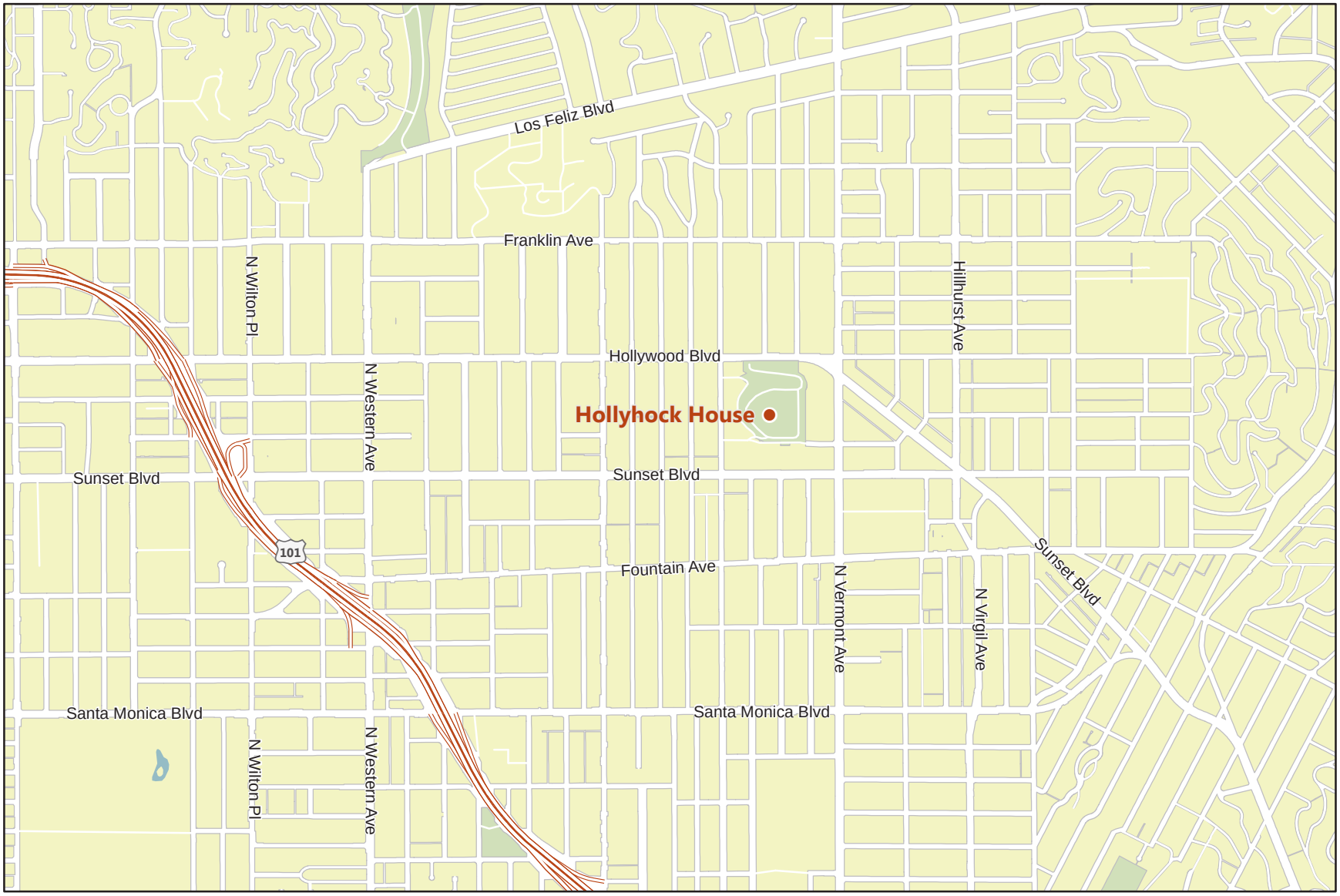
The 20th-Century Architecture of Frank Lloyd Wright
Hollyhock House, Los Angeles, California – City Locator



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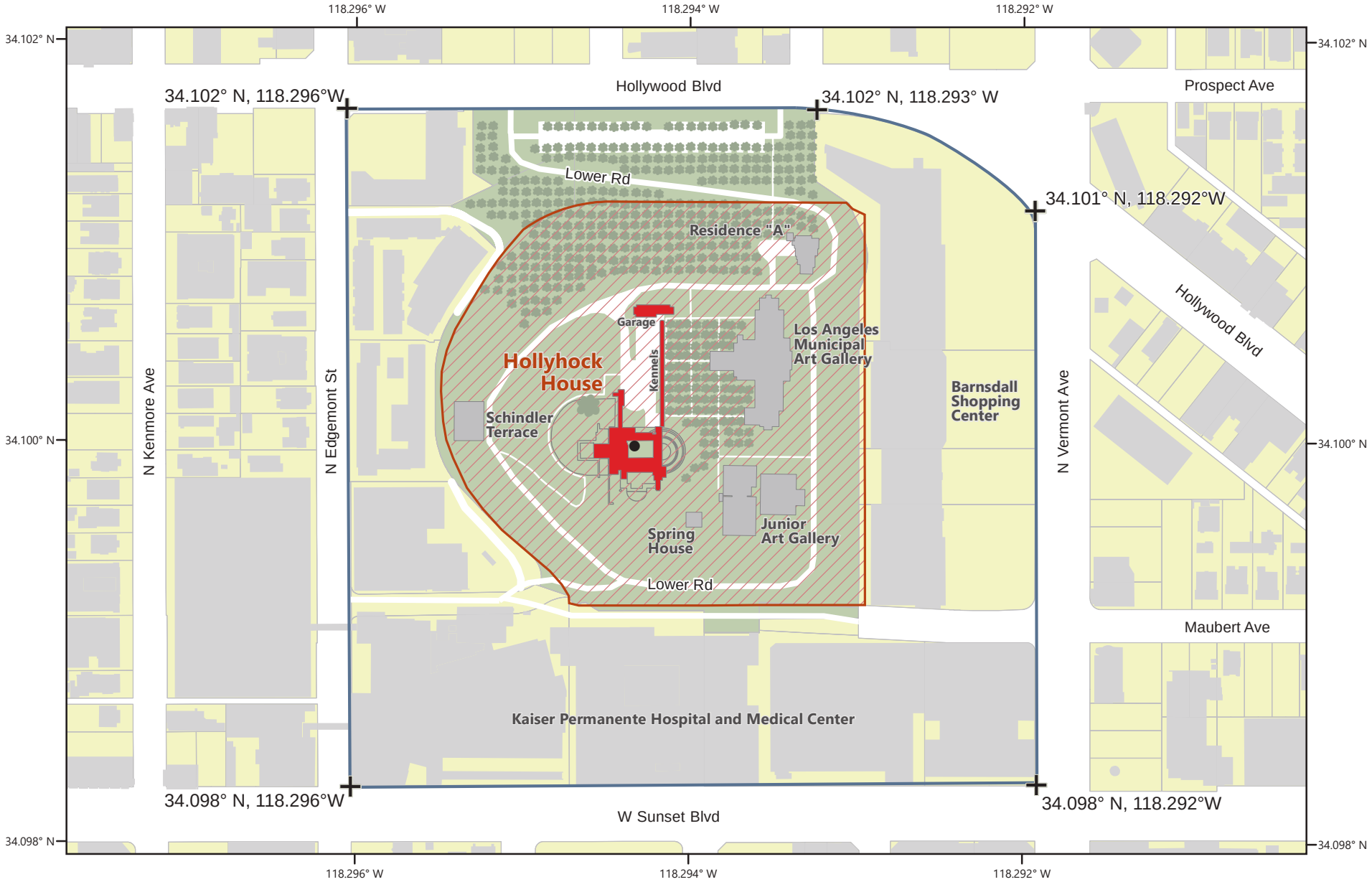
118.296° W
118.294° W
118.292° W
34.102° N
34.100° N
34.098° N
34.102° N, 118.296°W
34.102° N, 118.293° W
34.101° N, 118.292°W
34.098° N, 118.296°W
34.098° N, 118.292°W
Hollywood Blvd
Prospect Ave
Lower Rd
Residence "A"
Garage
Kennels
Hollyhock House
Schindler Terrace
Los Angeles Municipal Art Gallery
Barnsdall Shopping Center
Spring House
Junior Art Gallery
Lower Rd
Hollywood Blvd
Maubert Ave
N Kenmore Ave
N Edgemont St
N Vermont Ave
Kaiser Permanente Hospital and Medical Center
W Sunset Blvd
1:3,000
0
100 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
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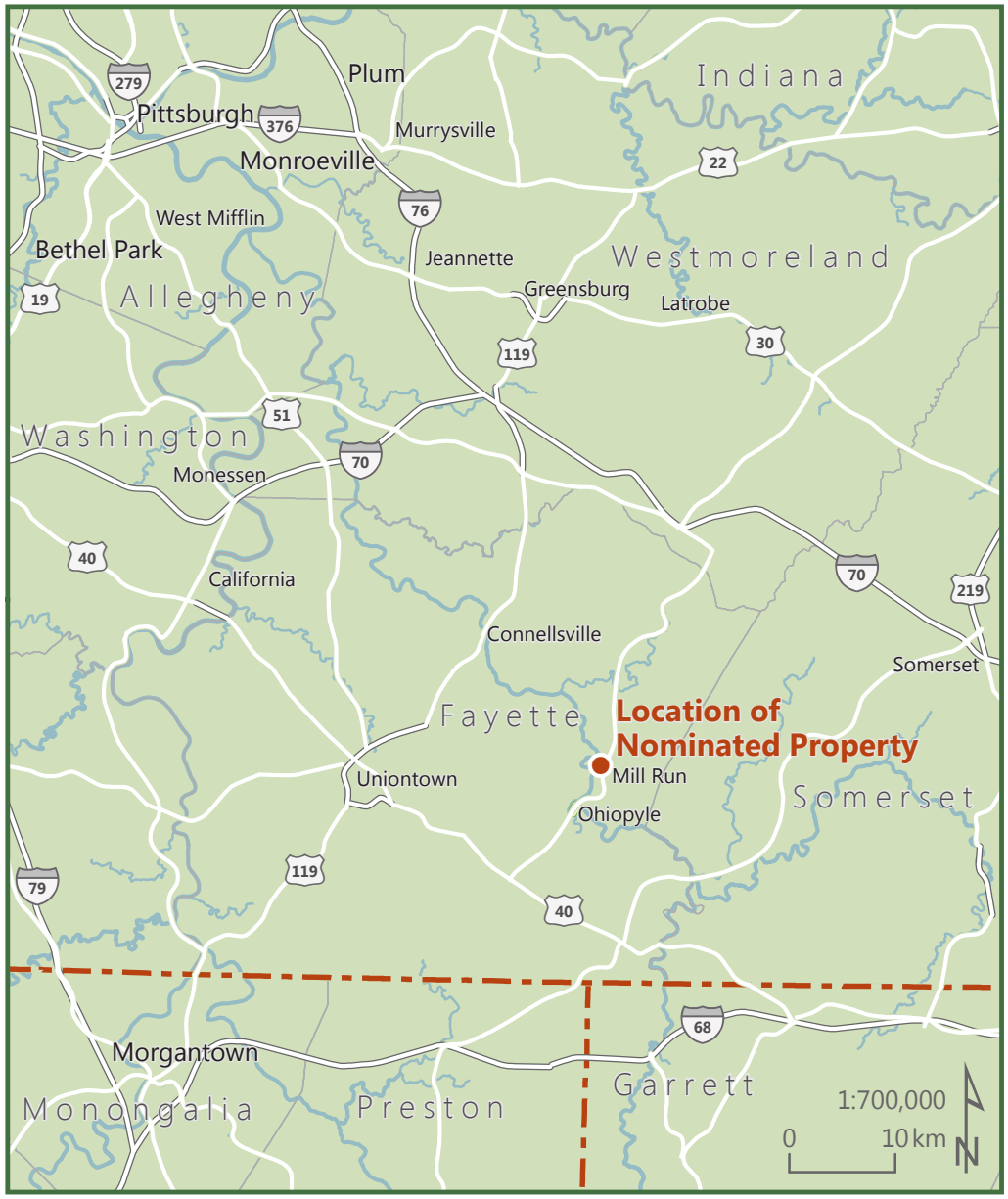
Gould Center, Department of Geography
The Pennsylvania State University

The 20th-Century Architecture of Frank Lloyd Wright
Fallingwater, Mill Run, Pennsylvania – Regional Locator



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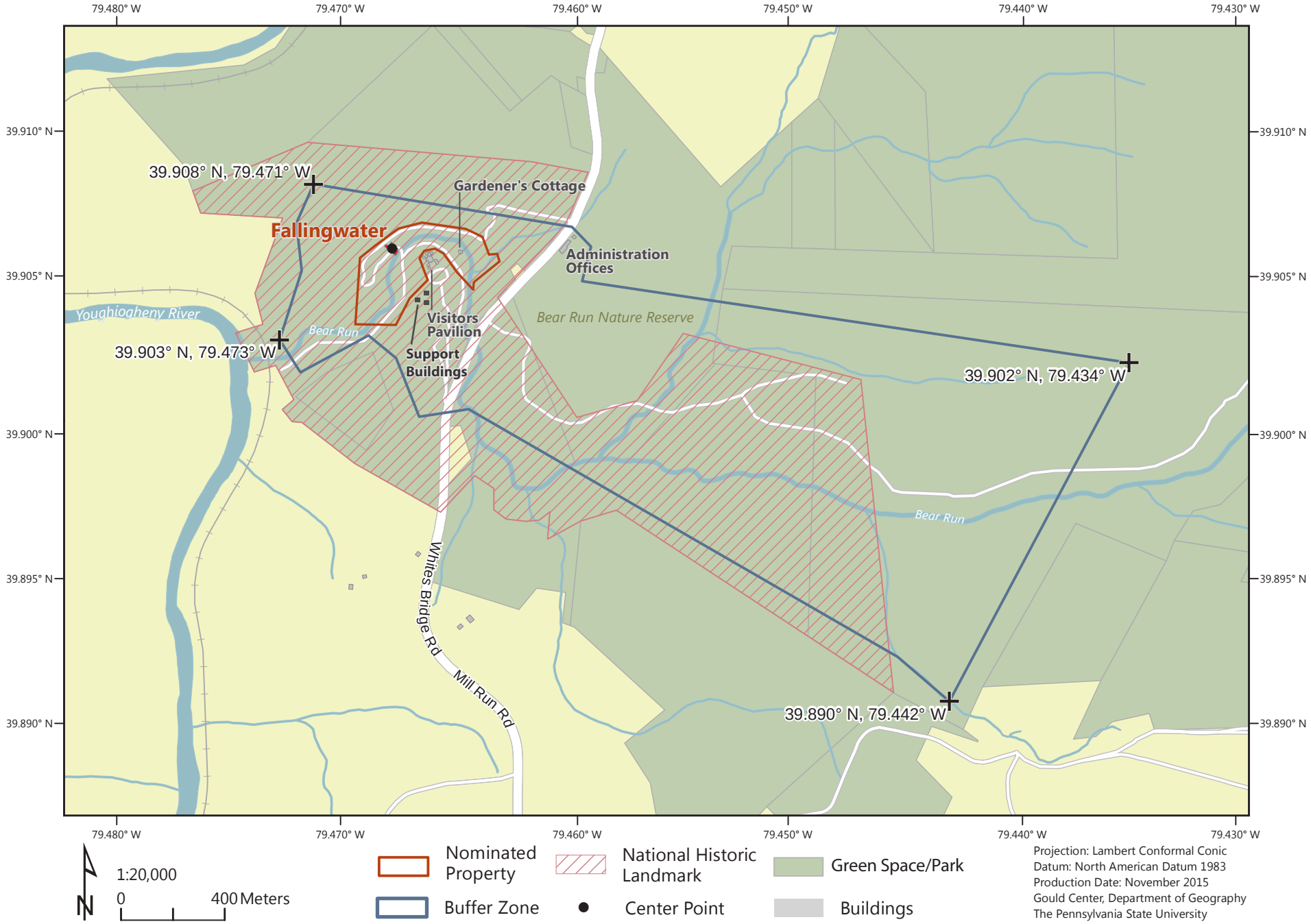
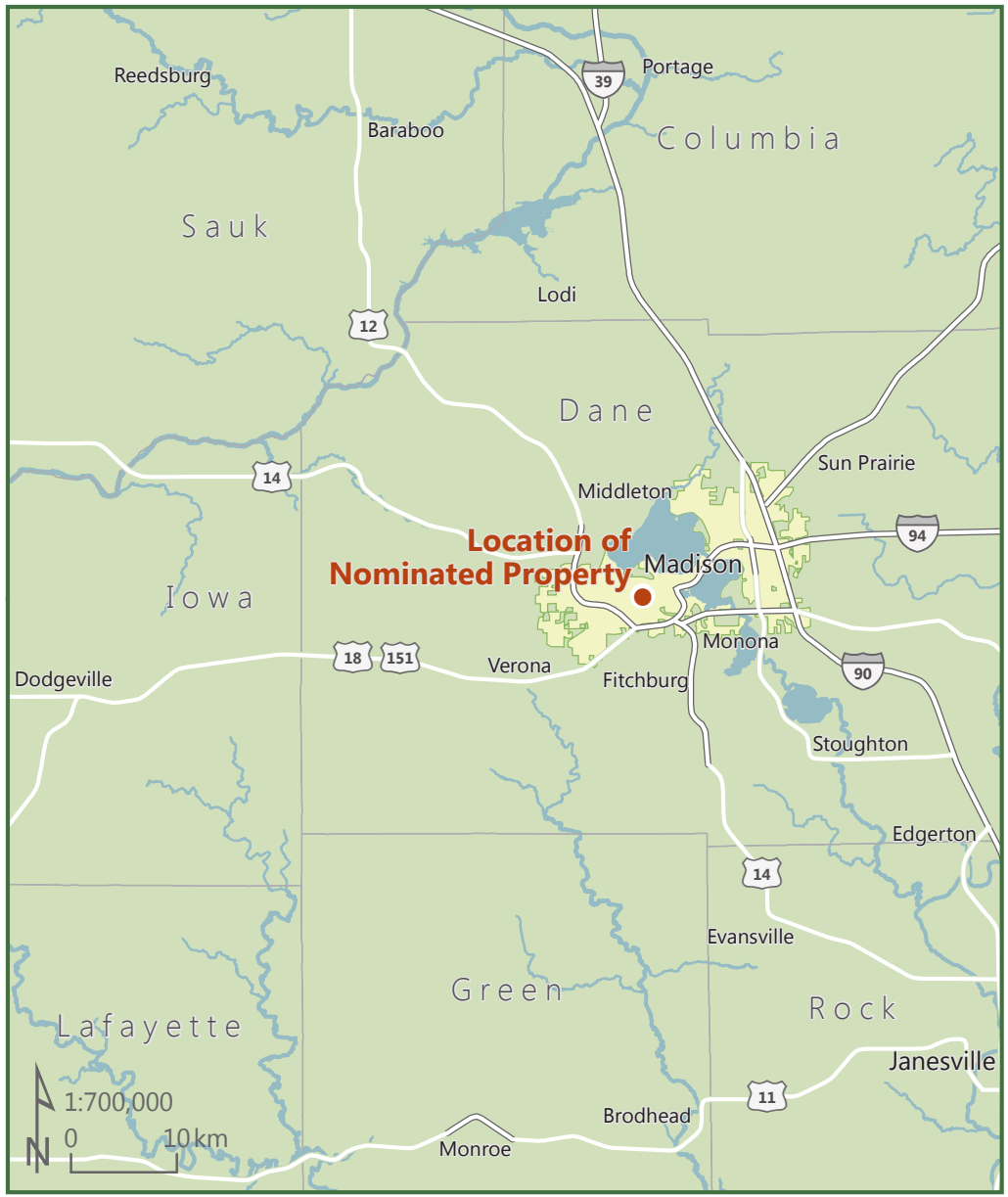

79.480° W
79.470° W
79.460° W
79.450° W
79.440° W
79.430° W
39.910° N
39.905° N
39.900° N
39.895° N
39.890° N
39.908° N, 79.471° W
Gardener's Cottage
Fallingwater
Administration Offices
Youghiogheny River
Bear Run
Visitors Pavilion
Support Buildings
Bear Run Nature Reserve
39.903° N, 79.473° W
39.902° N, 79.434° W
Bear Run
Whites Bridge Rd
Mill Run Rd
39.890° N, 79.442° W
1:20,000
0
400 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: November 2015
Gould Center, Department of Geography
The Pennsylvania State University

The 20th-Century Architecture of Frank Lloyd Wright
Herbert and Katherine Jacobs House, Madison, Wisconsin – Regional Locator



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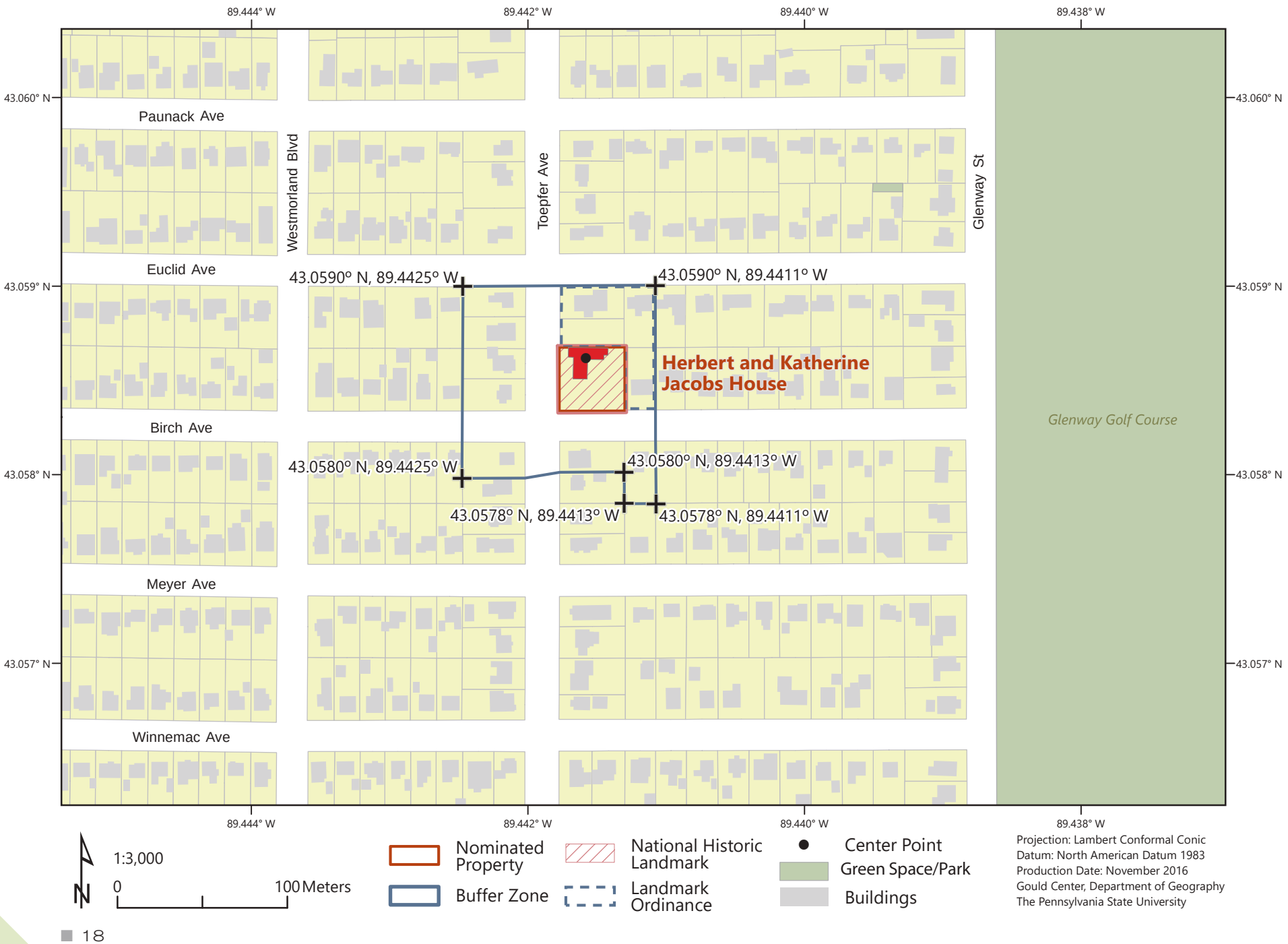
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University


89.444° W
89.442° W
89.440° W
89.438° W
43.060° N
43.059° N
43.058° N
43.057° N
Paunack Ave
Euclid Ave
Birch Ave
Meyer Ave
Winnemac Ave
Westmorland Blvd
Toepfer Ave
Glenway St
Glenway Golf Course
43.0590° N, 89.4425° W
43.0590° N, 89.4411° W
Herbert and Katherine Jacobs House
43.0580° N, 89.4425° W
43.0580° N, 89.4413° W
43.0578° N, 89.4413° W
43.0578° N, 89.4411° W
1:3,000
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100 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Landmark Ordinance
Center Point
Green Space/Park
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Projection: Lambert Conformal Conic
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The 20th-Century Architecture of Frank Lloyd Wright
Taliesin West, Scottsdale, Arizona – Regional Locator

Projection: Transverse Mercator, North American Datum 1983
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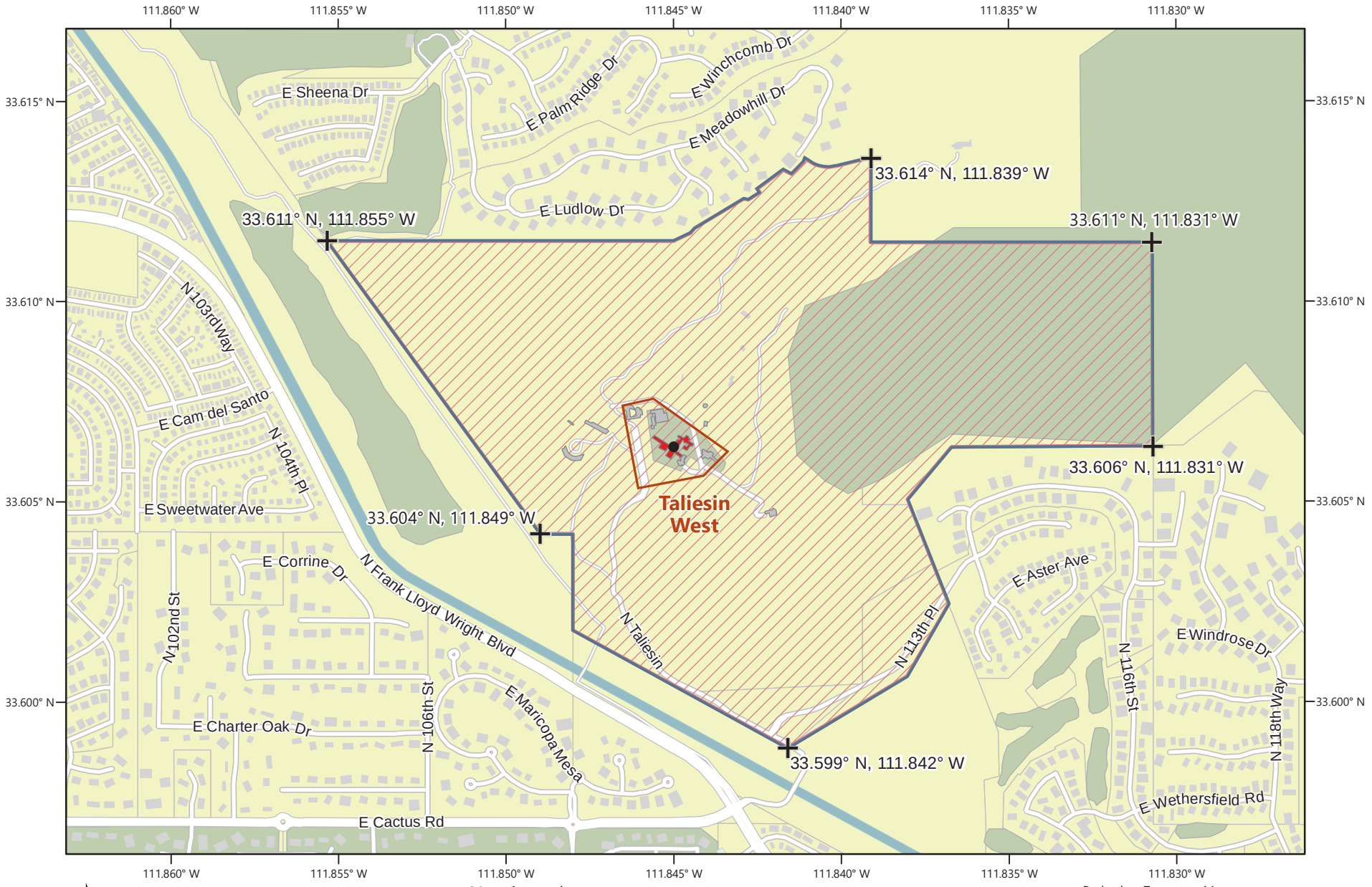
Gould Center, Department of Geography, The Pennsylvania State University


111.860° W
111.855° W
111.850° W
111.845° W
111.840° W
111.835° W
111.830° W
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33.610° N
33.605° N
33.600° N
E Sheena Dr
E Palm Ridge Dr
E Winchcomb Dr
E Meadowhill Dr
E Ludlow Dr
33.614° N, 111.839° W
33.611° N, 111.855° W
33.611° N, 111.831° W
33.606° N, 111.831° W
33.604° N, 111.849° W
33.599° N, 111.842° W
Taliesin West
N 103rd Way
E Cam del Santo
N 104th Pl
E Sweetwater Ave
E Corrine Dr
N Frank Lloyd Wright Blvd
N 102nd St
N Taliesin
N 113th Pl
E Aster Ave
E Windrose Dr
N 116th St
N 118th Way
E Wethersfield Rd
E Charter Oak Dr
N 106th St
E Maricopa Mesa
E Cactus Rd
1:15,000
0
400 Meters
Nominated Property
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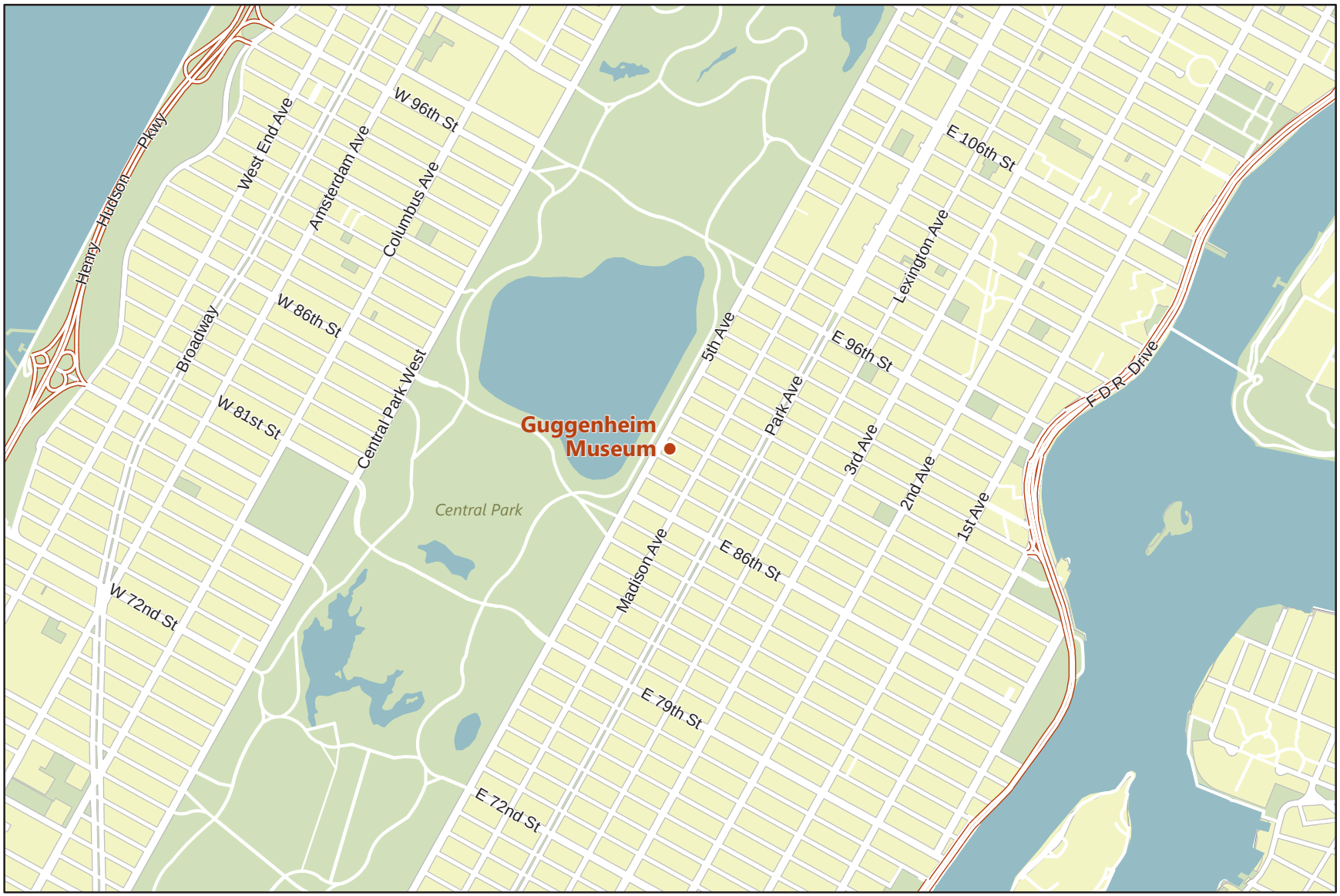
Projection: Lambert Conformal Conic, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University

Guggenheim Museum, New York, New York – City Locator



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Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography
The Pennsylvania State University


73.962° W
73.960° W
73.958° W
73.956° W
40.784° N
40.783° N
40.782° N
40.781° N
Jacqueline Kennedy Onassis Reservoir
Central Park
40.7839° N, 73.9585° W
40.7834° N, 73.9571° W
40.7822° N, 73.9597° W
40.7819° N, 73.9590° W
Guggenheim Museum
Madison Ave
E 92nd St
E 91st St
E 90th St
E 89th St
E 88th St
E 87th St
E 86th St
Park Ave
5th Ave
East Dr
86th St Transverse
1:3,000
0
100 Meters
N
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
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The Pennsylvania State University

Criterion Under Which Property is Nominated

The series *The 20th-Century Architecture of Frank Lloyd Wright* is nominated under the following criterion:

(ii) To exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning, or landscape design.

Draft Statement of Outstanding Universal Value

Brief synthesis

The 20th-Century Architecture of Frank Lloyd Wright is a series of eight buildings that illustrate a full range of ways in which Wright's unique approach to architectural design fused form with spirit to influence the course of architecture in both North America and beyond. The components, located in six states across the continental United States of America, were designed and built over a period spanning the first half of the twentieth century. Each has strong individual characteristics, presenting a specific aspect or facet of a new architectural solution to the needs of Americans for housing, worship, work, and leisure. The buildings employ geometric abstraction and spatial manipulation as a response to functional and emotional needs and are based literally or figuratively on nature's forms and principles. In adapting inspirations from global cultures, they break free of traditional forms and facilitate modern life. Wright's solutions would go on to influence architecture and design throughout the world, and continue to do so to this day.

The components of the series include houses both grand and modest (including the consummate example of a "Prairie" house and the prototype "Usonian" house); a place of worship; a museum; and complexes of the architect's own homes with studio and education facilities. These buildings are located variously in city, suburb, forest, and desert. The substantial range of function, scale, and setting in the series underscores both the consistency and the wide applicability of these principles, which are often called "organic architecture." Each has been specifically recognized for its individual influence, which also contributes uniquely to the elaboration of this original architectural language.

The series showcases innovations such as: the open plan; the blurring of the boundary between interior and exterior; new uses of materials such as steel and concrete, as in cantilevered construction; new technologies such as radiant heating; the embrace of the automobile; and explicit responses to natural settings. Such features, however, are subordinated to designs that integrate form, materials, technology, furnishings, and setting into a unified whole. Each building is uniquely fitted to the needs of its owner and its function and, though designed by the same architect, each has a very different character and appearance, reflecting a deep respect and appreciation for the individual and the particular. Together, *The 20th-Century Architecture of Frank Lloyd Wright* illustrates the full range of this architectural language, which is a singular contribution to global architecture in spatial, formal, material, and technological terms.

Justification for Criterion

Criterion (ii)

To exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning, or landscape design.

The 20th-Century Architecture of Frank Lloyd Wright demonstrates an important interchange in the discourse that changed architecture on a global scale during the first half of the twentieth century. The eight components illustrate different aspects of a new approach to architecture consciously developed for an American context. Reacting against prevailing styles in the United States that were based on historic European models, this approach took advantage of new materials and technologies, but was also inspired by principles of the natural world and was nurtured by other cultures and eras, particularly Japanese design traditions. Common features of this architecture were geometric abstraction and spatial manipulation to respond to functional and emotional needs; a connection to nature's forms and principles; and aspects reflecting the value Wright placed on the primacy of the individual as fundamental to American society, including new habits of life in the twentieth century.

These innovative ideas and the resulting unified architectural works were noted in European architectural and critical circles early in the century. Assemblies, lectures and publications by Dutch and German architects and Russian constructivists acclaimed Wright's American works, with architects J.J.P. Oud, Walter Gropius, Ludwig Mies van der Rohe, and later Alvar Aalto, Jørn Utzon and Carlo Scarpa among those praising his contributions. Beyond Europe, Max Cento and Juan O'Gorman in Latin America, Walter Burley Griffin and Marion Mahony Griffin in Australia, and Raku Endo in Japan each claimed Wright as an influence during their careers.

Frank Lloyd Wright sought to establish new forms appropriate to the history, character, habits and geography of the United States. The resulting buildings, however, were in fact suited to modern life in many countries, and in their fusion of spirit and form they evoked emotional responses that were universal in their appeal.

While other architects incorporated many of the characteristics of this series such as the open plan, horizontality of form, ribbon windows, and blurring of interior and exterior space, Wright's buildings demonstrated an original architectural synthesis recognized by both critics and architects, offering a distinct and more personalized alternative to the austere, machine-inspired, rationalism characteristic of the Modern Movement. In doing so, some of the buildings in this series also offered new functional models that unerringly fit the character of modern life. Together, the series shows a comprehensive approach to architectural problems rather than showcasing individual buildings, however iconic. The legacy of this approach endures as a separate current of thought within modern architecture.

Integrity

This series of buildings contains all the elements necessary to understand and express the Outstanding Universal Value of the property, as it contains the works generally understood by critics and other architects to have been most influential, and the best examples of the noted residential forms of Prairie houses and Usonian houses. Each component highlights a different aspect of the attributes that demonstrate this influence: Unity Temple for its dynamic cubic form and early use of reinforced concrete; the Frederick C. Robie House as the quintessential Prairie house, with its innovative open plan; Taliesin as the consummate example of organic connection to the landscape; Hollyhock House as a model for the interpretation of indigenous forms; Fallingwater as the complete example of a design that fully unifies the parts and the whole; the Herbert and Katherine Jacobs House as the prototype of the Usonian house; Taliesin West as the highest example of a choreographed procession through space that gives a rich experience of its setting; and the Solomon R. Guggenheim Museum as the prototype of an art museum where the building itself is an art object. Each component work is of adequate size to include critical elements of its setting and none suffers from adverse effects of development or neglect. Each building has benefited from careful and comprehensive conservation studies and expert technical advice to ensure a high level of preservation. Buffer zones protect the adjacent settings of each building.

Authenticity

The structures in this series and their settings have remained remarkably unchanged since their construction in their form and design, use and function, materials and substance, and spirit and feeling. Conservation of each of the buildings, when needed to correct long-term structural issues or repair deterioration, has been in accordance with the highest standards of professional practice, ensuring the long-term conservation of original fabric wherever possible, and the significant features of each site. In all cases work has been based on exceptionally complete documentation. Very few features have been modified. In cases where the original function has changed, the current use is fully consistent with the original design.

Protection and Management Requirements

One of the components of this series is owned by a local government; the others are in private ownership, including by non-profit organizations, foundations and an individual. Each building is protected from alteration, demolitions, and other inappropriate changes through deed restrictions, local preservation ordinances and zoning laws, private conservation easements, and state law. Each property has been designated by the United States Department of the Interior as an individual National Historic Landmark, which gives it, under federal law, the highest level of consideration in the context of any actions by the Federal Government. Each site has an effective management system that makes use of a suite of planning and conservation guidance to ensure protection of the attributes that convey the series' Outstanding Universal Value, and the Frank Lloyd Wright World Heritage Council, formally established in 2012, meets regularly to support the professional management of the series.

Name and Contact Information of Official Local Institution/Agency

Stephen Morris
Chief
Office of International Affairs
United States National Park Service
1849 C Street NW, Room 2741
Washington, DC 20240
T: 202/354.1803
E: stephen_morris@nps.gov
W: www.nps.gov/orgs/1955/index.htm

Barbara Gordon
Executive Director
Frank Lloyd Wright Building Conservancy
53 W Jackson Boulevard 1120
Chicago, Illinois 60604-3548
T: 312/663.5500
E: bgordon@savewright.org
W: www.savewright.org

"His is an original architecture. He works to simplify architectural masses, while treating ornament as something purely secondary. His forms are so original that in the final analysis no contemporary European tendencies are visible in his work."

H. P. Berlage, "The New American Architecture," Schweizerische Bauzeitung *(1912)*

SECTION 1

IDENTIFICATION OF PROPERTY

1: IDENTIFICATION OF PROPERTY

1.a	**State Party**	United States of America
1.b	**States**	Arizona, California, Illinois, Pennsylvania, New York, Wisconsin
1.c	**Name of Property**	The 20th-Century Architecture of Frank Lloyd Wright

1.d Geographical Coordinates to the Nearest Second

NAME OF COMPONENT PART	CITY/STATE	COORDINATES OF THE CENTRAL POINT	AREA OF NOMINATED COMPONENT OF THE PROPERTY (ha)	AREA OF THE BUFFER ZONE (ha)	SEE MAP ON PAGE
Unity Temple	Oak Park Illinois	87°47'47.767"W 41°53'18.308"N	0.167	10.067	32 - 33
Frederick C. Robie House	Chicago Illinois	87°35'45.053"W 41°47'23.001"N	0.130	1.315	34 - 36
Taliesin	Spring Green Wisconsin	90°4'12.979"W 43°8'27.962"N	4.931	200.899	37 - 38
Hollyhock House	Los Angeles California	118°17'34"W 34°5'0.54"N	4.608	13.986	39 - 41
Fallingwater	Mill Run Pennsylvania	79°27'59.312"W 39°54'20.055"N	11.212	282.299	42 - 43
Herbert and Katherine Jacobs House	Madison Wisconsin	43° 3' 30.8874"W 89° 26' 29.7594"N	0.139	1.286	44 - 45
Taliesin West	Scottsdale Arizona	111°50'44.31"W 33°36'32.834"N	4.285	198.087	46 - 47
Solomon R. Guggenheim Museum	New York New York	73°57'35.353"W 40°46'57.72"N	0.251	2.164	48 - 50
TOTAL AREA			**26.369**	**710.103**	

1.e Letter Size Maps of the Nominated Property, Showing Boundaries and Buffer Zones

Global/National Map Sources

Environmental Systems Research Institute, Great Lakes Information Network, National Atlas, National Hydrography Dataset, National Oceanic and Atmospheric Administration, Natural Earth Data, United States Census, United States Department of Agriculture, United States Geological Survey, United States National Park Service.

State Map Sources

Columbia University, Commonwealth of Pennsylvania, Oklahoma State University, State of Arizona, State of California, State of Kansas, State of New York, State of Wisconsin, Pennsylvania Spatial Data Access (PASDA), The Pennsylvania State University, Taliesin Preservation Inc., University of Arizona, University of Hawaii, University of Wisconsin-Madison, Western Pennsylvania Conservancy.

Local Map Sources

City of Chicago, City of New York, City of Scottsdale (Arizona), Cook County (Illinois), Iowa County (Wisconsin), Los Angeles County (California), Maricopa County (Arizona).

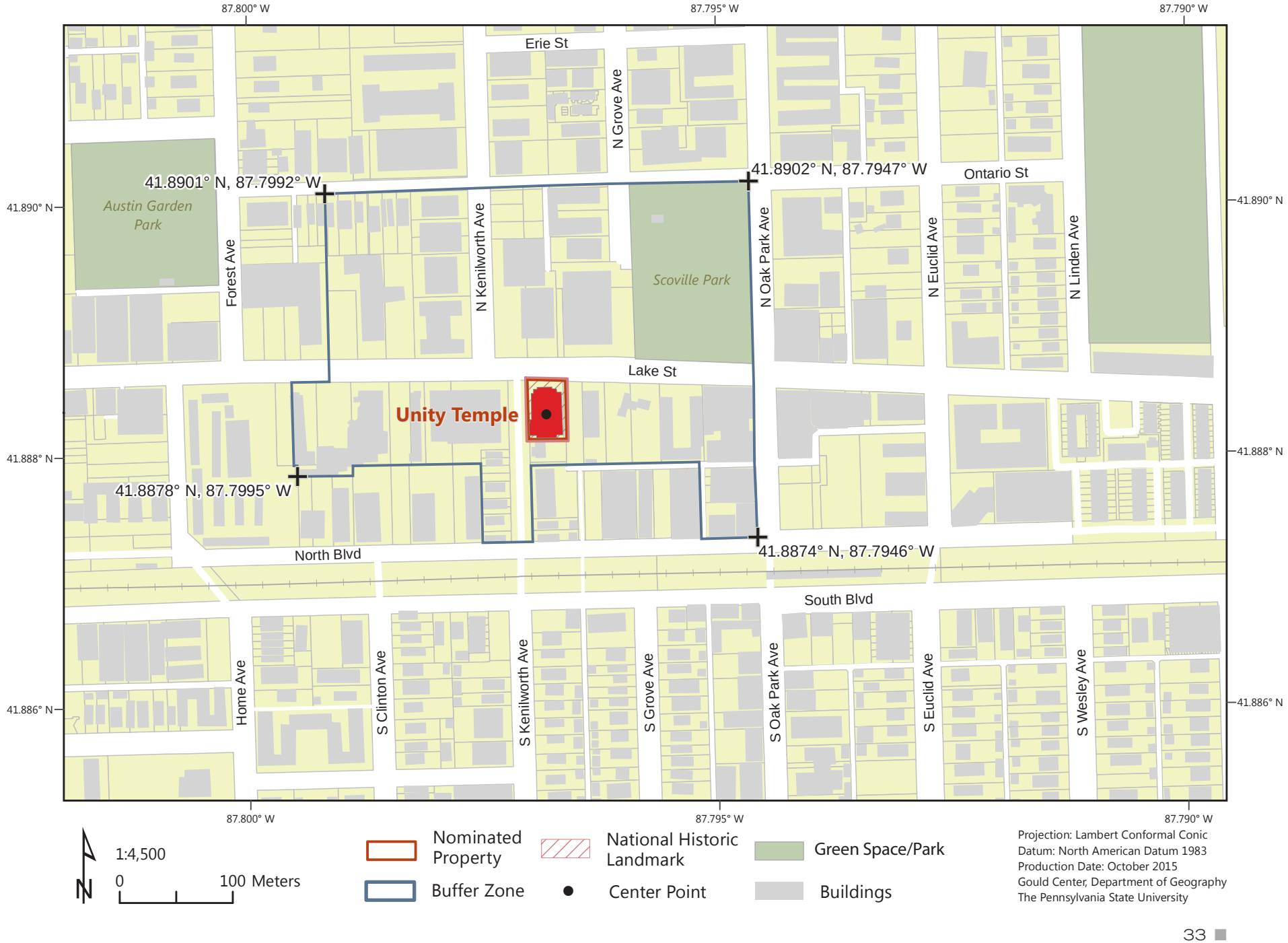
Other Map Sources

www.openstreetmap.org, www.thematicmapping.org.

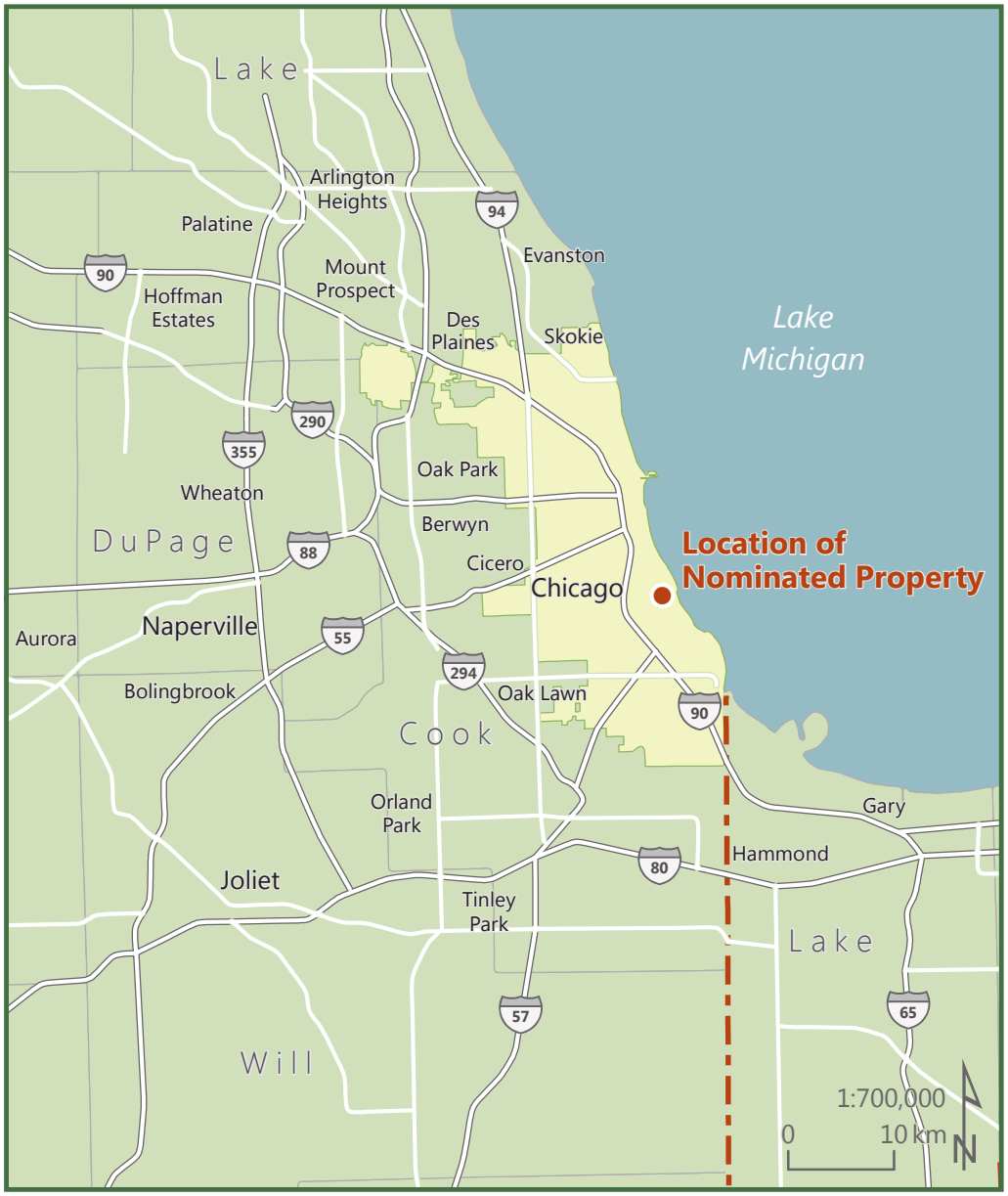

120° W
110° W
100° W
90° W
80° W
70° W
40° N
30° N
CANADA
UNITED STATES OF AMERICA
MEXICO
Pacific Ocean
Atlantic Ocean
Taliesin
Jacobs House
Madison
Robie House
Unity Temple
Oak Park
Guggenheim Museum
Fallingwater
Hollyhock House
Los Angeles
Taliesin West
Scottsdale
California
Arizona
1:21,000,000
0
1,000 Kilometers
Projection: Albers Equal Area Conic
Datum: North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography
The Pennsylvania State University

Unity Temple, Oak Park, Illinois – Regional Locator

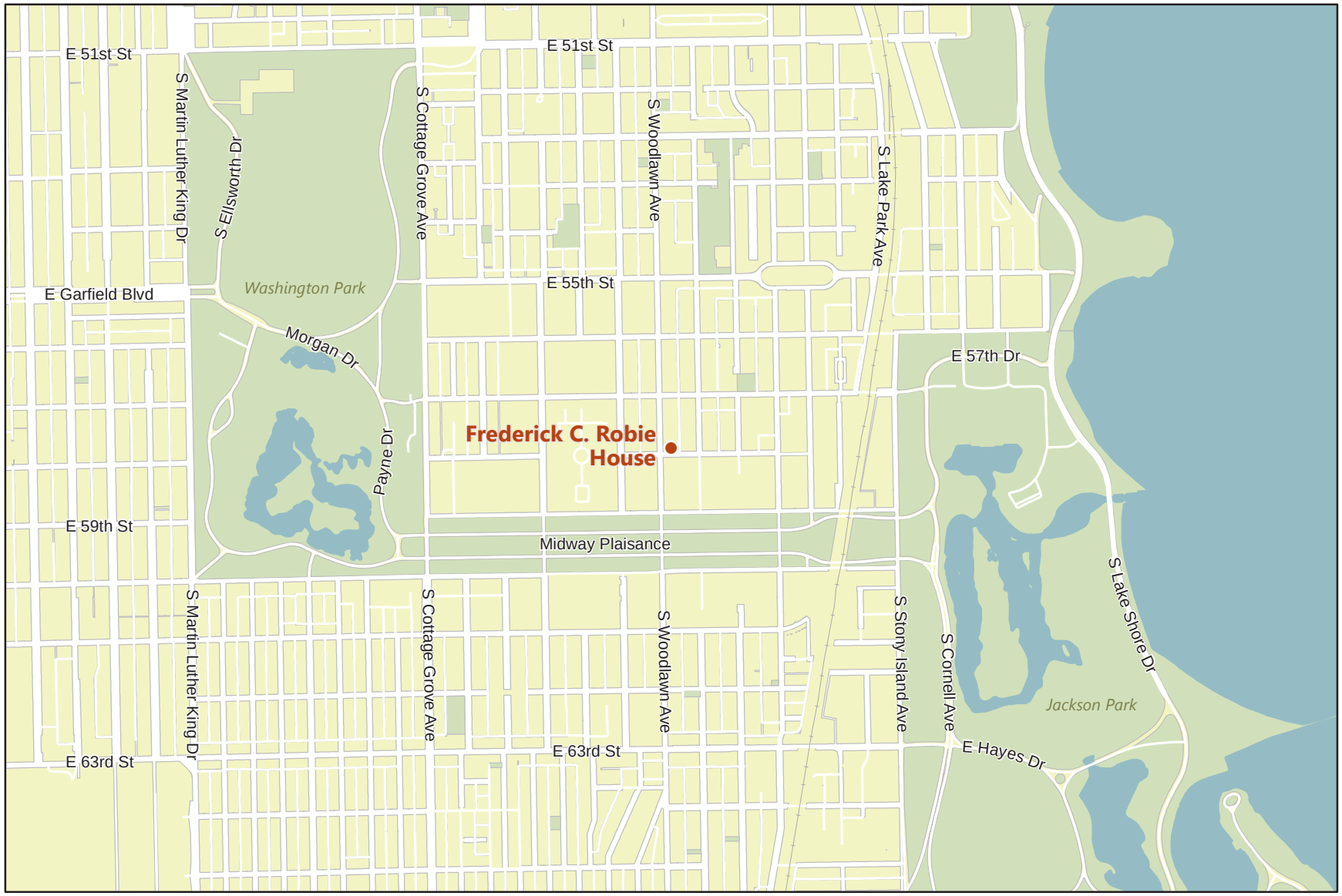
Projection: Transverse Mercator, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University


87.800° W
87.795° W
87.790° W
41.890° N
41.888° N
41.886° N
Erie St
N Grove Ave
Ontario St
41.8901° N, 87.7992° W
41.8902° N, 87.7947° W
Austin Garden Park
Forest Ave
N Kenilworth Ave
Scoville Park
N Oak Park Ave
N Euclid Ave
N Linden Ave
Lake St
Unity Temple
41.8878° N, 87.7995° W
41.8874° N, 87.7946° W
North Blvd
South Blvd
Home Ave
S Clinton Ave
S Kenilworth Ave
S Grove Ave
S Oak Park Ave
S Euclid Ave
S Wesley Ave
1:4,500
0
100 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: October 2015
Gould Center, Department of Geography
The Pennsylvania State University

Frederick C. Robie House, Chicago, Illinois – Regional Locator



Projection: Transverse Mercator, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University



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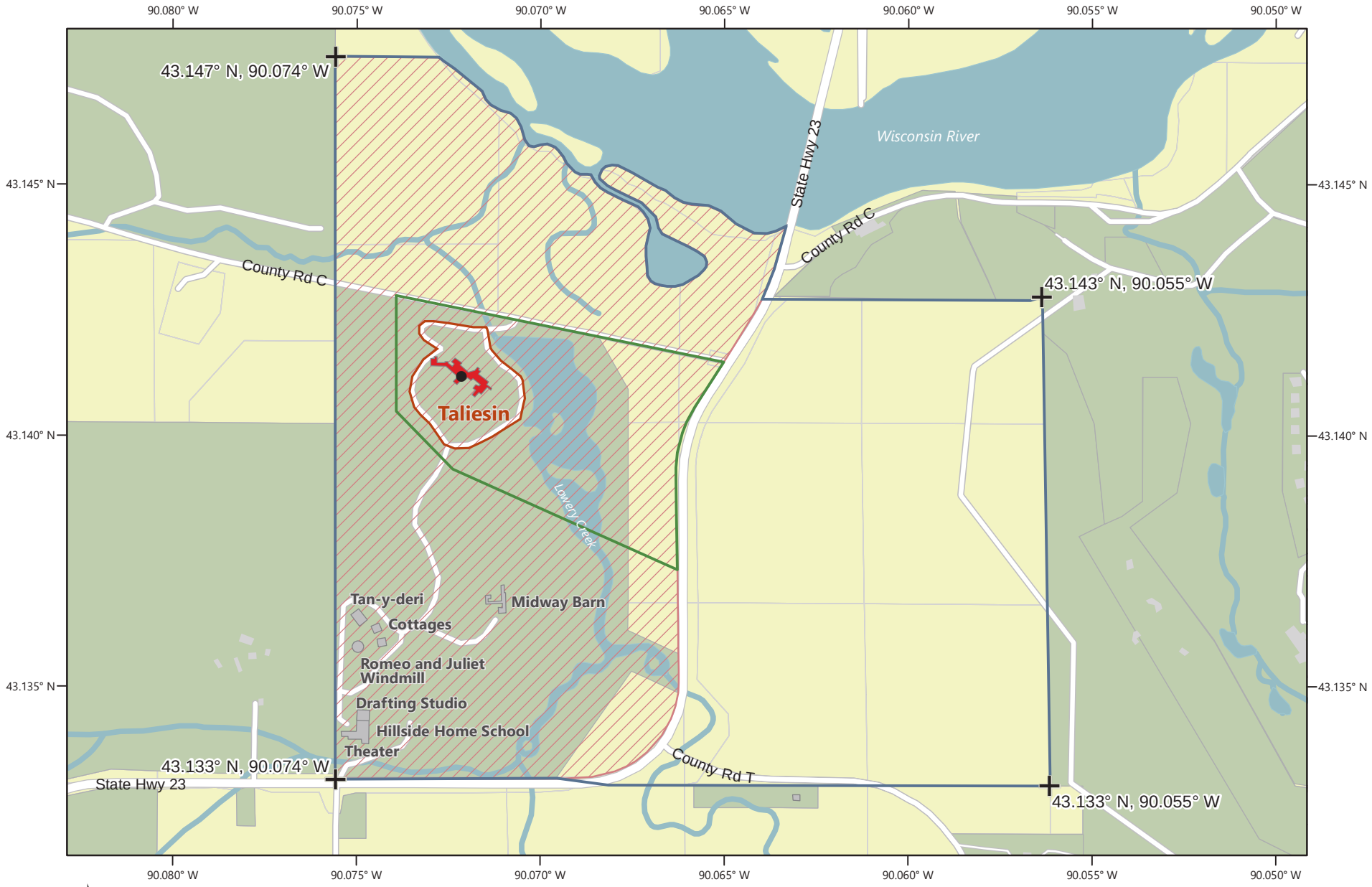
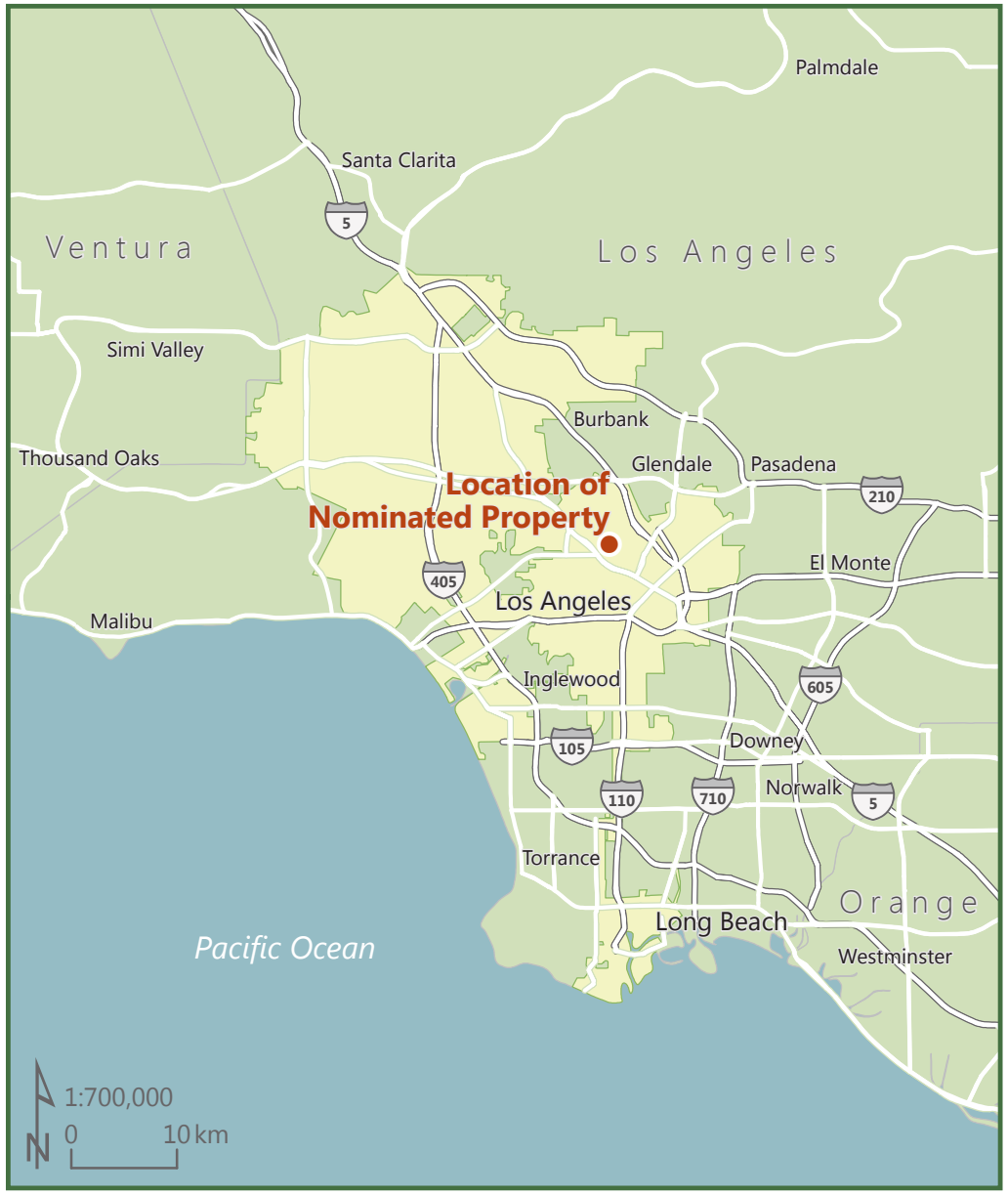
0 1 Kilometers

Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography
The Pennsylvania State University


87.600° W
87.598° W
87.596° W
87.594° W
87.592° W
41.791° N
41.790° N
41.789° N
41.788° N
E 57th St
S Kimbark Ave
S Kenwood Avenue
41.7904° N, 87.5972° W
41.7904 N, 87.5957° W
Frederick C. Robie House
E 58th St
41.7896° N, 87.5979° W
41.7896° N, 87.5956° W
S University Ave
S Woodlawn Ave
S Dorchester Ave
E 59th St
Midway Plaisance
E Midway Plaisance Dr North
1:3,500
0
100 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Transverse Mercator
Datum: North American Datum 1983
Production Date: November 2015
Gould Center, Department of Geography
The Pennsylvania State University

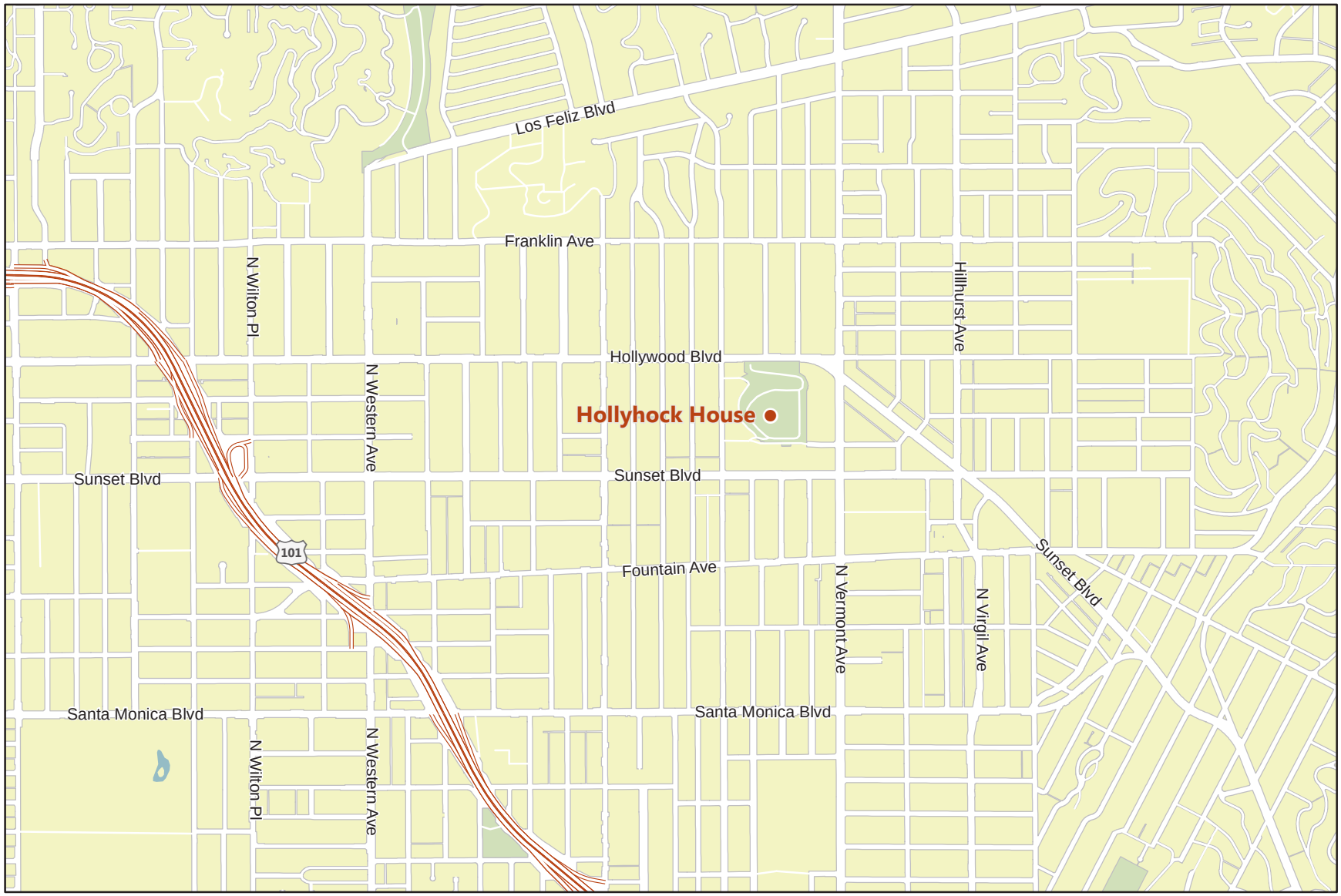
Projection: Lambert Conformal Conic, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University


90.080° W
90.075° W
90.070° W
90.065° W
90.060° W
90.055° W
90.050° W
43.147° N, 90.074° W
43.145° N
43.140° N
43.135° N
Wisconsin River
State Hwy 23
County Rd C
43.143° N, 90.055° W
Taliesin
Lowery Creek
Tan-y-deri
Midway Barn
Cottages
Romeo and Juliet Windmill
Drafting Studio
Hillside Home School
Theater
43.133° N, 90.074° W
State Hwy 23
County Rd T
43.133° N, 90.055° W
1:12,000
0
400 Meters
Nominated Property
Buffer Zone
Green Space/Park
Covenant
National Historic Landmark
Buildings
Center Point
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2018
Gould Center, Department of Geography
The Pennsylvania State University



Projection: California Teale Albers, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University

The 20th-Century Architecture of Frank Lloyd Wright
Hollyhock House, Los Angeles, California – City Locator



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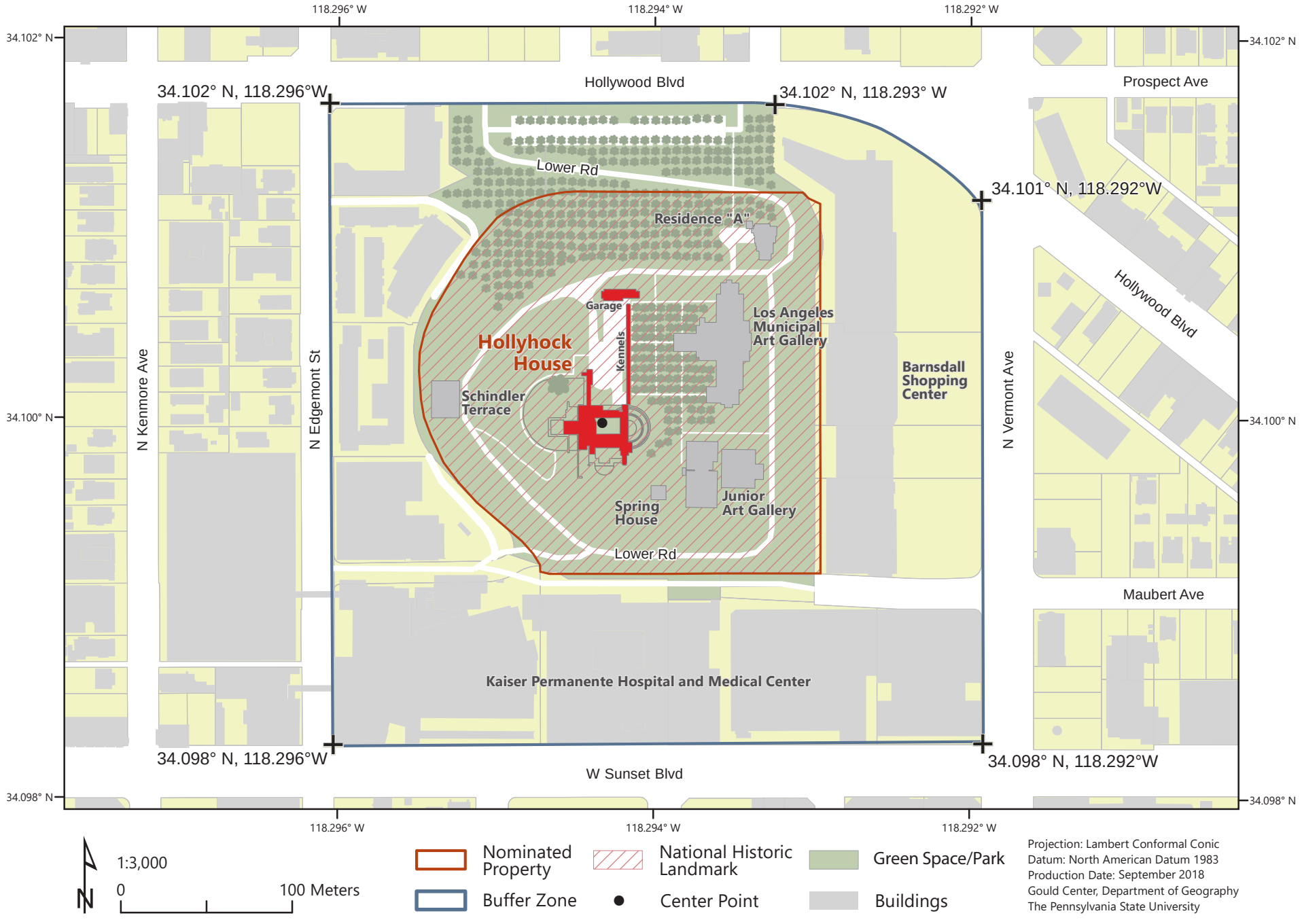
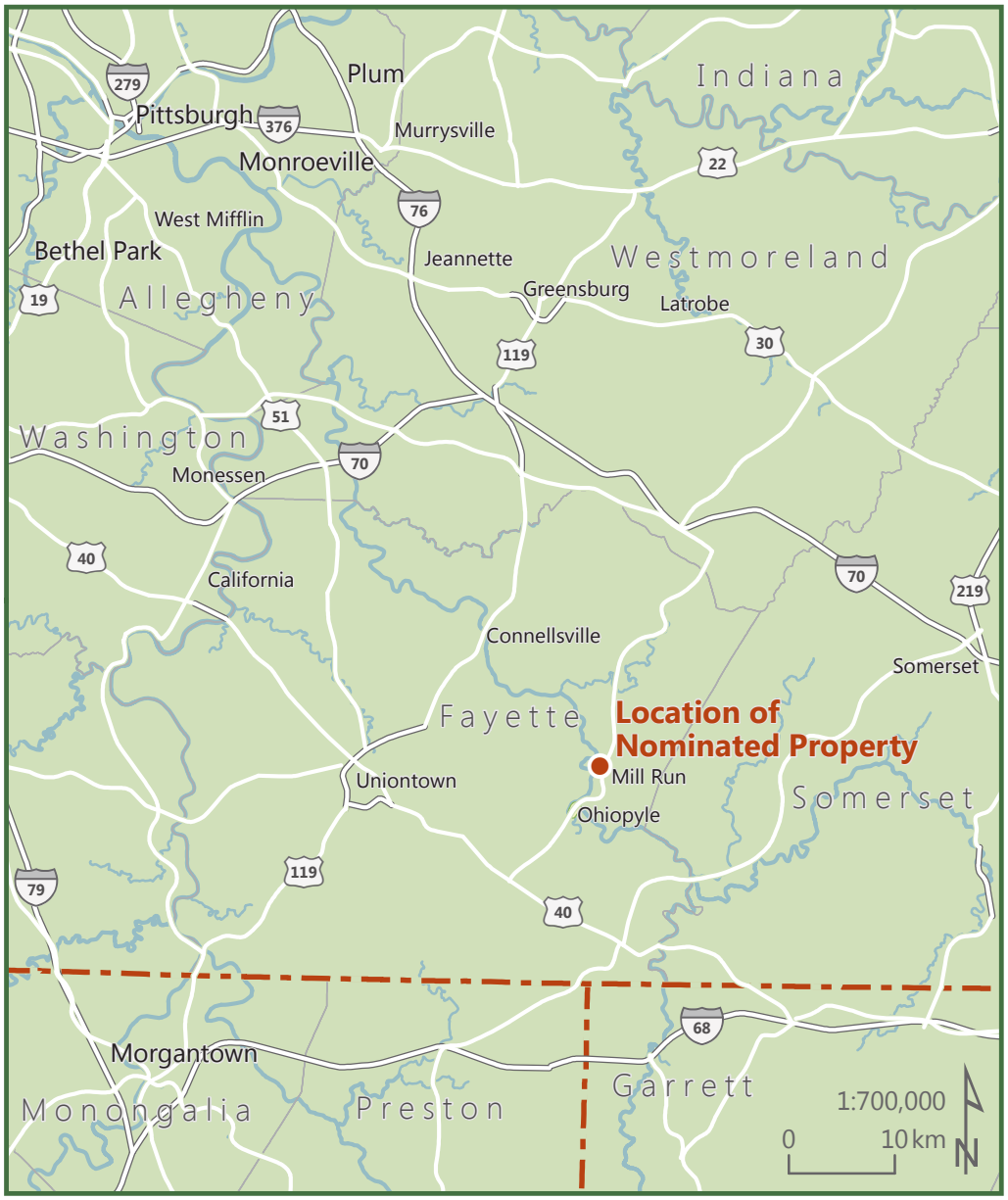
Gould Center, Department of Geography
The Pennsylvania State University


118.296° W
118.294° W
118.292° W
34.102° N
34.100° N
34.098° N
34.102° N, 118.296°W
34.102° N, 118.293° W
34.101° N, 118.292°W
34.098° N, 118.296°W
34.098° N, 118.292°W
Hollywood Blvd
Prospect Ave
Lower Rd
Residence "A"
Garage
Kennels
Hollyhock House
Schindler Terrace
Los Angeles Municipal Art Gallery
Barnsdall Shopping Center
Spring House
Junior Art Gallery
Lower Rd
N Kenmore Ave
N Edgemont St
N Vermont Ave
Hollywood Blvd
Maubert Ave
Kaiser Permanente Hospital and Medical Center
W Sunset Blvd
1:3,000
0
100 Meters
N
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2018
Gould Center, Department of Geography
The Pennsylvania State University

Fallingwater, Mill Run, Pennsylvania – Regional Locator



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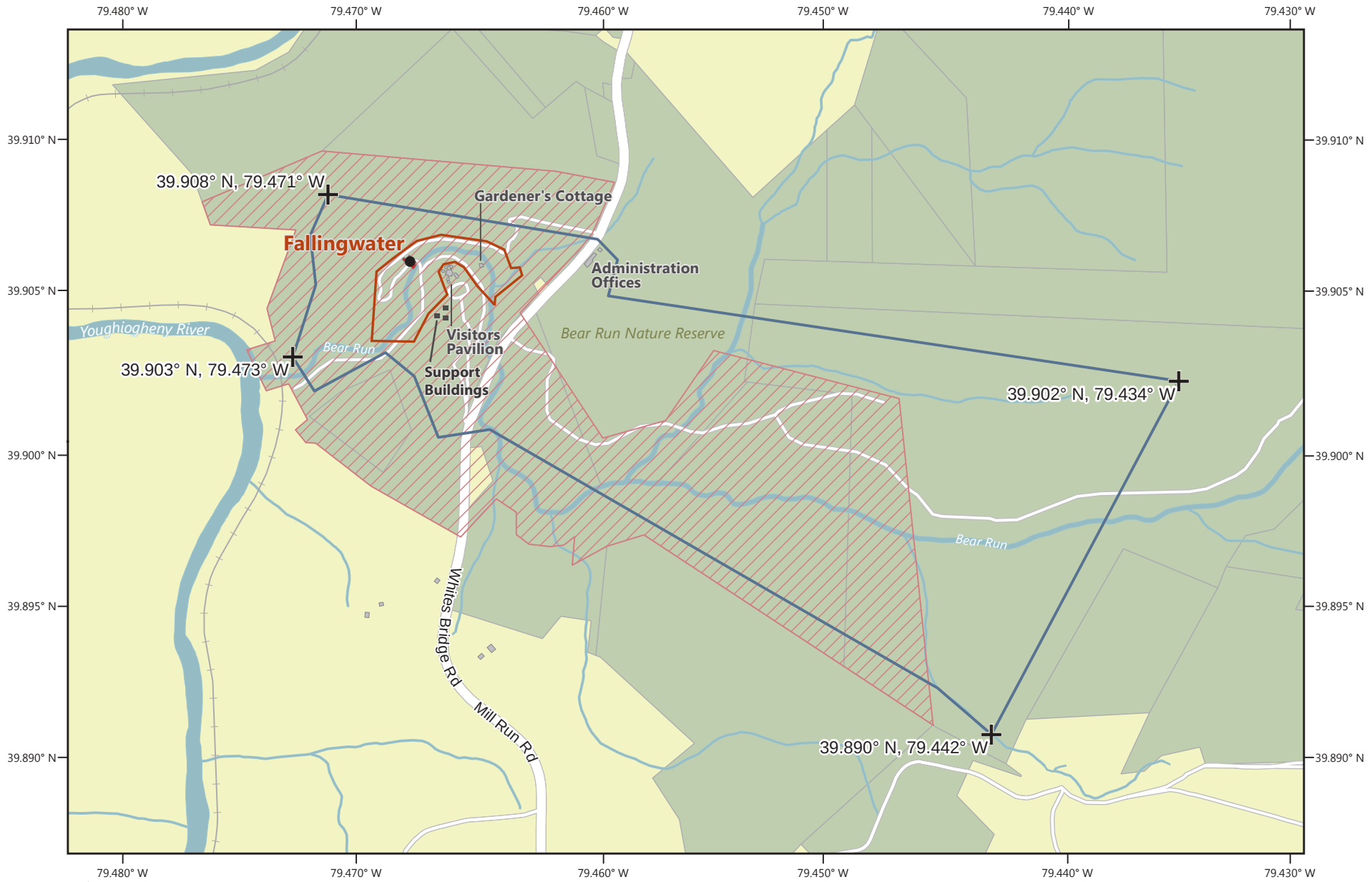
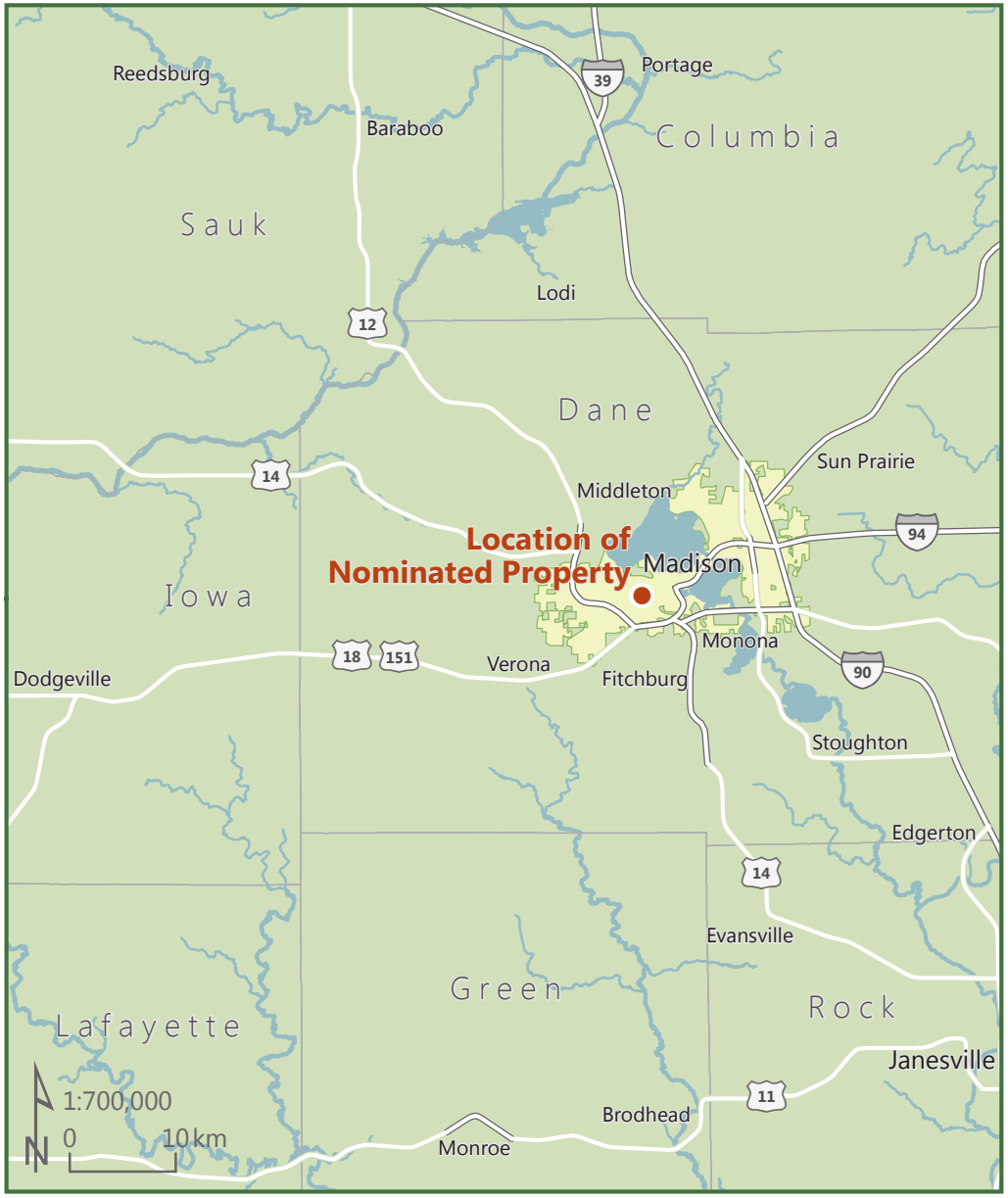
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University


79.480° W
79.470° W
79.460° W
79.450° W
79.440° W
79.430° W
39.910° N
39.905° N
39.900° N
39.895° N
39.890° N
39.908° N, 79.471° W
Gardener's Cottage
Fallingwater
Administration Offices
Youghiogheny River
Bear Run
Visitors Pavilion
Support Buildings
39.903° N, 79.473° W
Bear Run Nature Reserve
39.902° N, 79.434° W
Bear Run
Whites Bridge Rd
Mill Run Rd
39.890° N, 79.442° W
1:20,000
0
400 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: November 2015
Gould Center, Department of Geography
The Pennsylvania State University

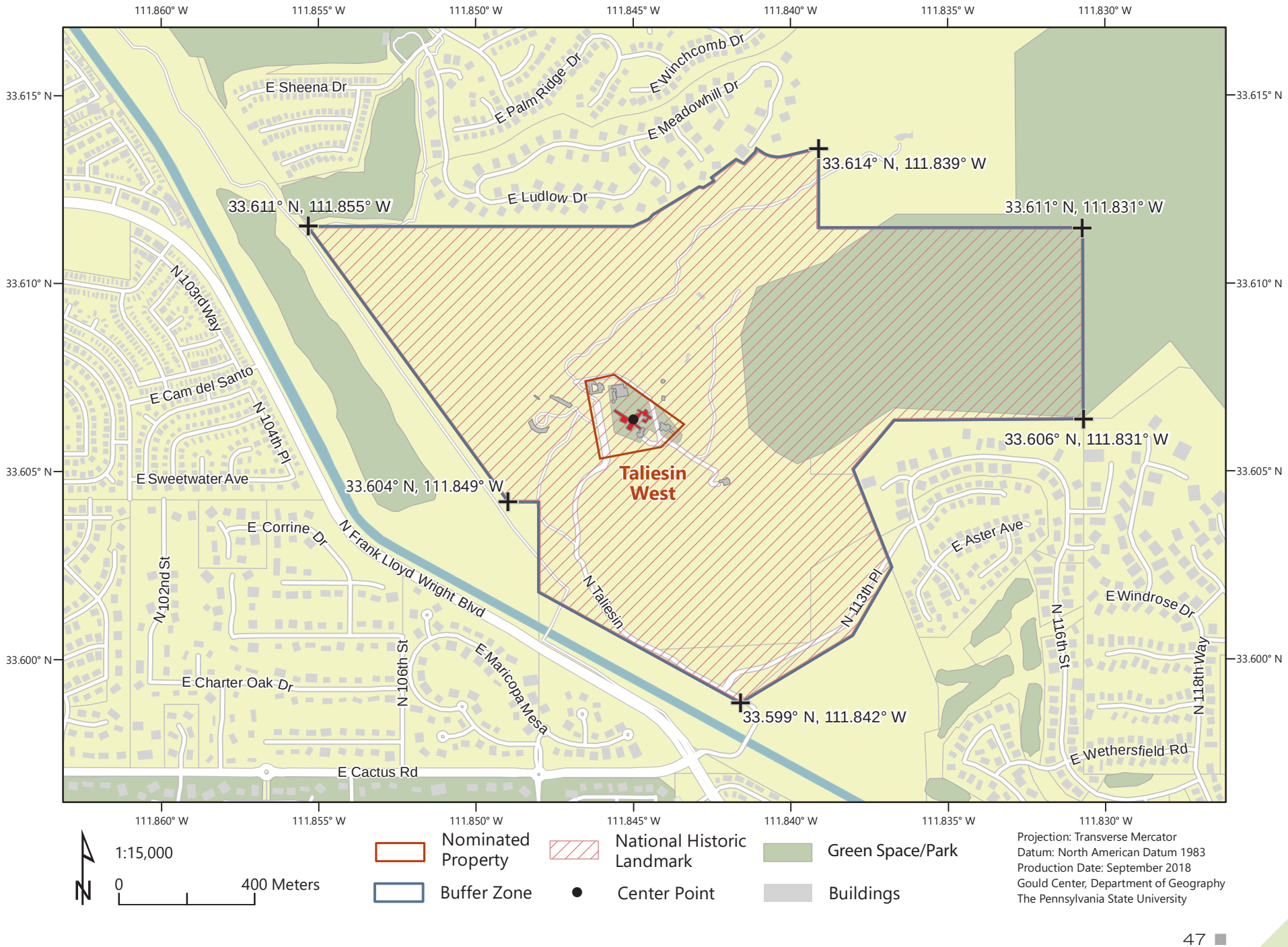
Herbert and Katherine Jacobs House, Madison, Wisconsin – Regional Locator



Projection: Lambert Conformal Conic, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University

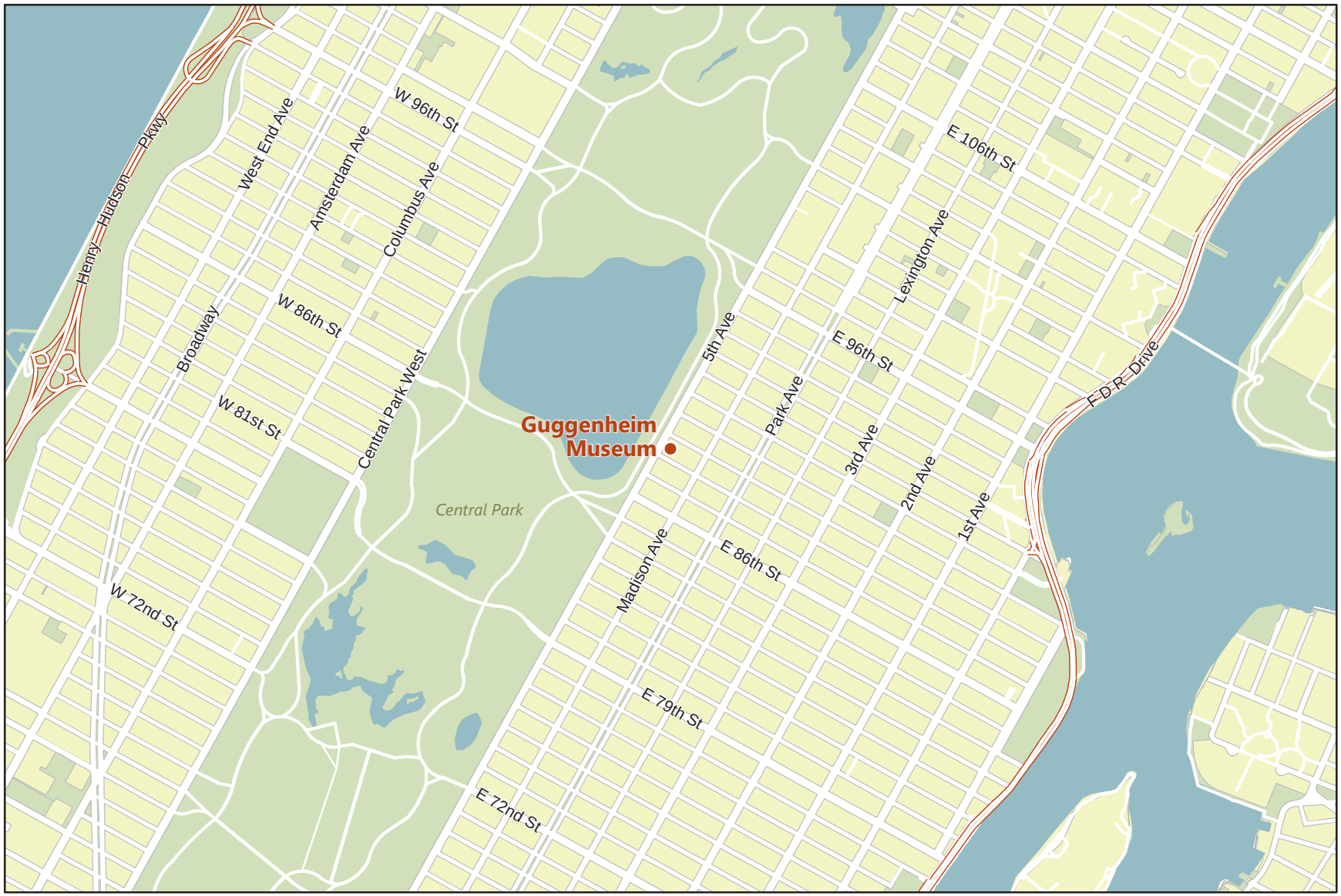

89.444° W
89.442° W
89.440° W
89.438° W
43.060° N
43.059° N
43.058° N
43.057° N
Paunack Ave
Euclid Ave
Birch Ave
Meyer Ave
Winnemac Ave
Westmorland Blvd
Toepfer Ave
Glenway St
43.0590° N, 89.4425° W
43.0590° N, 89.4411° W
Herbert and Katherine Jacobs House
Glenway Golf Course
43.0580° N, 89.4425° W
43.0580° N, 89.4413° W
43.0578° N, 89.4413° W
43.0578° N, 89.4411° W
1:3,000
0
100 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Landmark Ordinance
Center Point
Green Space/Park
Buildings
Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: November 2016
Gould Center, Department of Geography
The Pennsylvania State University

Projection: Transverse Mercator, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University


111.860° W
111.855° W
111.850° W
111.845° W
111.840° W
111.835° W
111.830° W
33.615° N
33.610° N
33.605° N
33.600° N
E Sheena Dr
E Palm Ridge Dr
E Winchcomb Dr
E Meadowhill Dr
E Ludlow Dr
33.614° N, 111.839° W
33.611° N, 111.855° W
33.611° N, 111.831° W
N 103rd Way
E Cam del Santo
N 104th Pl
E Sweetwater Ave
33.606° N, 111.831° W
33.604° N, 111.849° W
Taliesin West
E Corrine Dr
N Frank Lloyd Wright Blvd
N 102nd St
N Taliesin
N 113th Pl
E Aster Ave
E Windrose Dr
N 116th St
N 118th Way
E Charter Oak Dr
N 106th St
E Maricopa Mesa
33.599° N, 111.842° W
E Wethersfield Rd
E Cactus Rd
1:15,000
0
400 Meters
Nominated Property
Buffer Zone
National Historic Landmark
Center Point
Green Space/Park
Buildings
Projection: Transverse Mercator
Datum: North American Datum 1983
Production Date: September 2018
Gould Center, Department of Geography
The Pennsylvania State University

Guggenheim Museum, New York, New York – Regional Locator

Projection: Lambert Conformal Conic, North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography, The Pennsylvania State University



Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2014
Gould Center, Department of Geography
The Pennsylvania State University

The 20th-Century Architecture of Frank Lloyd Wright
Guggenheim Museum, New York, New York

1.f Area of the Component Sites Including Buffer Zone

NAME OF COMPONENT SITE	CITY / STATE	GEOGRAPHICAL COORDINATES	APPROXIMATE PROPERTY AREA IN HECTARE(S)	APPROXIMATE BUFFER AREA IN HECTARE(S)
Unity Temple	Oak Park Illinois	87°47'47.767"W 41°53'18.308"N	0.167	10.067
Frederick C. Robie House	Chicago Illinois	87°35'45.053"W 41°47'23.001"N	0.130	1.315
Taliesin	Spring Green Wisconsin	90°4'12.979"W 43°8'27.962"N	4.931	200.899
Hollyhock House	Los Angeles California	118°17'34"W 34°5'0.54"N	4.608	13.986
Fallingwater	Mill Run Pennsylvania	79°27'59.312"W 39°54'20.055"N	11.212	282.299
Herbert and Katherine Jacobs House	Madison Wisconsin	43° 3' 30.8874"W 89° 26' 29.7594"N	0.139	1.286
Taliesin West	Scottsdale Arizona	111°50'44.31"W 33°36'32.834"N	4.285	198.087
Solomon R. Guggenheim Museum	New York New York	73°57'35.353"W 40°46'57.72"N	0.251	2.164
TOTAL AREA			**26.369**	**710.103**

"Wright's great virtue consists in the fact that he uses to the full modern methods of construction and boldly invents new forms without losing his great sense of tact, the tact of the artist with his materials, of the lover of nature with the earth, and of a man with other men. Hence the importance of the garden which surrounds and completes almost all of his buildings: it is a true symbol of his entire work—the picture of life, warm, earthy, insurgent, breaking waves of foliage over the stony masses of the building, and showing the power from it and counterbalancing it."

Lewis Mumford, "Frank Lloyd Wright and the New Pioneers," Architectural Record (1929)

SECTION 2

DESCRIPTION

2.a: DESCRIPTION OF THE PROPERTY

THE EIGHT COMPONENT BUILDINGS of this series are located in six states, encompassing a wide variety of geographic and cultural settings across the breadth of the continental United States. These settings include large cities and suburban and rural areas located in temperate zones, desert, forest, coastal, and central regions. The buildings range in size from a small house to large public constructions. Their functions include houses, studio and educational facilities, a place of worship, and a museum.

The buildings are described individually below, ordered by date of design,* as follows:

Unity Temple, Oak Park, Illinois, designed 1905, constructed 1906-1909.

Frederick C. Robie House, Chicago, Illinois, designed 1908, constructed 1910.

Taliesin, Spring Green, Wisconsin, begun 1911, constructed 1911-1959.

Hollyhock House, Los Angeles, California, designed 1918, constructed 1918-1921.

Fallingwater, Mill Run, Pennsylvania, designed 1935, constructed 1936-1939.

Herbert and Katherine Jacobs House, Madison, Wisconsin, designed 1936, constructed 1936-1937.

Taliesin West, Scottsdale, Arizona, begun 1938.

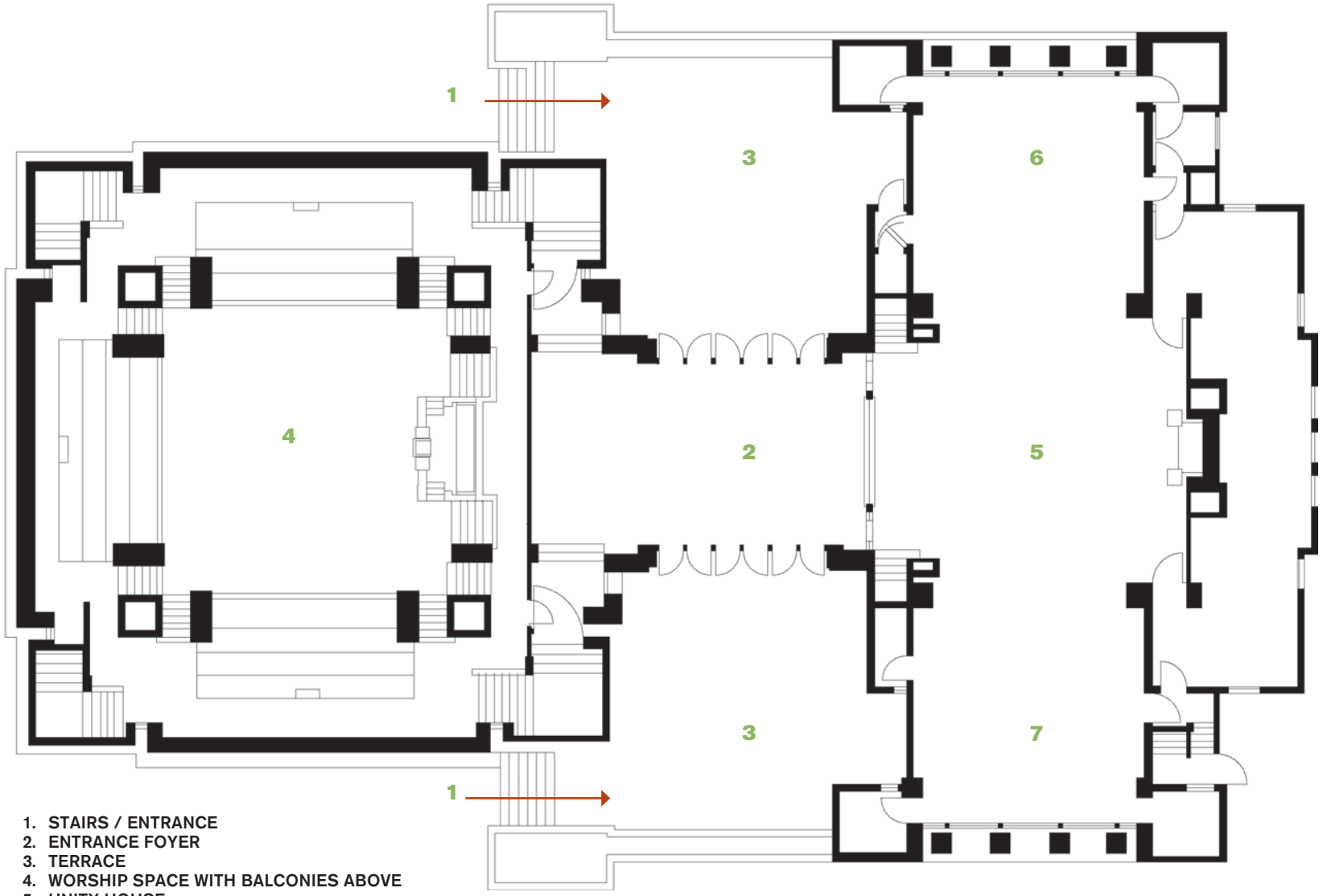
Solomon R. Guggenheim Museum, New York, New York, designed 1943, constructed 1956-1959.

**NOTE: There is debate among scholars regarding the dates associated with these works. The dates used for the nomination are those preferred by the Frank Lloyd Wright Foundation.*

2.a: UNITY TEMPLE
OAK PARK, ILLINOIS

Photograph by Tim Rossifer, courtesy of Harboe Architects, 2017.

UNITY TEMPLE
Plan of Ground Floor



1. STAIRS / ENTRANCE
2. ENTRANCE FOYER
3. TERRACE
4. WORSHIP SPACE WITH BALCONIES ABOVE
5. UNITY HOUSE
6. EAST ALCOVE WITH BALCONY ABOVE
7. WEST ALCOVE WITH BALCONY ABOVE

Purna Nanawala, delineator.

BUILT BETWEEN 1906 AND 1909, Unity Temple is the home of the Unity Temple Unitarian Universalist Congregation of Oak Park. The construction of Unity Temple used monolithic reinforced concrete in conjunction with a structural cantilever to create a dynamic space defined by intersecting and overlapping planes.

Unity Temple is located in the village of Oak Park, a suburb of Chicago, in Cook County, Illinois. Oak Park is generally flat with streets laid out in an orthogonal grid pattern. There are various architectural styles of the late nineteenth and early twentieth centuries throughout the village. Unity Temple is situated on a 30m by 52m lot at the southeast corner of Lake Street and North Kenilworth Avenue with the lot comprising the proposed boundary for inscription. The north side faces Lake Street, a major commercial street, while the west side fronts Kenilworth Avenue, a primarily residential street. Buildings on Lake Street vary in height from three to eight stories while buildings on Kenilworth Avenue are generally two or three stories. Unity Temple is within Oak Park's Ridgeland-Oak Park Historic District. Its buffer zone extends into a residential zoning district on its western, northern, and eastern borders, parts of which also fall within the adjacent Frank Lloyd Wright–Prairie School of Architecture Historic District.

Unity Temple demonstrates a very early use of reinforced concrete used for architectural effect. It is comprised of two cubic forms, linked by a foyer that contains the entrance doors. The northern two-and-one-half-story temple, the larger of the two sections, contains the auditorium/worship space, or sanctuary. The lower and wider two-story southern section, called Unity House, contains classroom and meeting spaces. The exposed concrete walls of the exterior define a series of geometric units that appear to be independent of one another and yet they interpenetrate in both vertical and horizontal directions. Stylized piers which stand in front of clerestory windows of art glass, support the cantilevered flat roofs extending beyond the wall planes. Parapet walls rise above them to conceal skylights. The closed appearance of the exterior provides a sense of spiritual removal for the auditorium/worship space within, defining a distinct interior environment. The solid walls also serve the practical purpose of buffering noise from the street.

The building circulation leads the worshiper into a space that is calm and unified. The carefully choreographed experience begins as one enters on the side street. From the low ceiling and dim light of the entrance foyer, one has an open view into the more brightly lit Unity House and of its fireplace. However, there is no view into the auditorium/worship space and its entrances are partially concealed. A circuitous route with two turns and a dark corridor leading to stairs brings one into the sanctuary. At the top of the stairs the skylights in the sanctuary give the space an amber glow, with natural light from clerestory windows. The resulting experience is one of rich contrast: from darkness to light, and confinement to freedom.

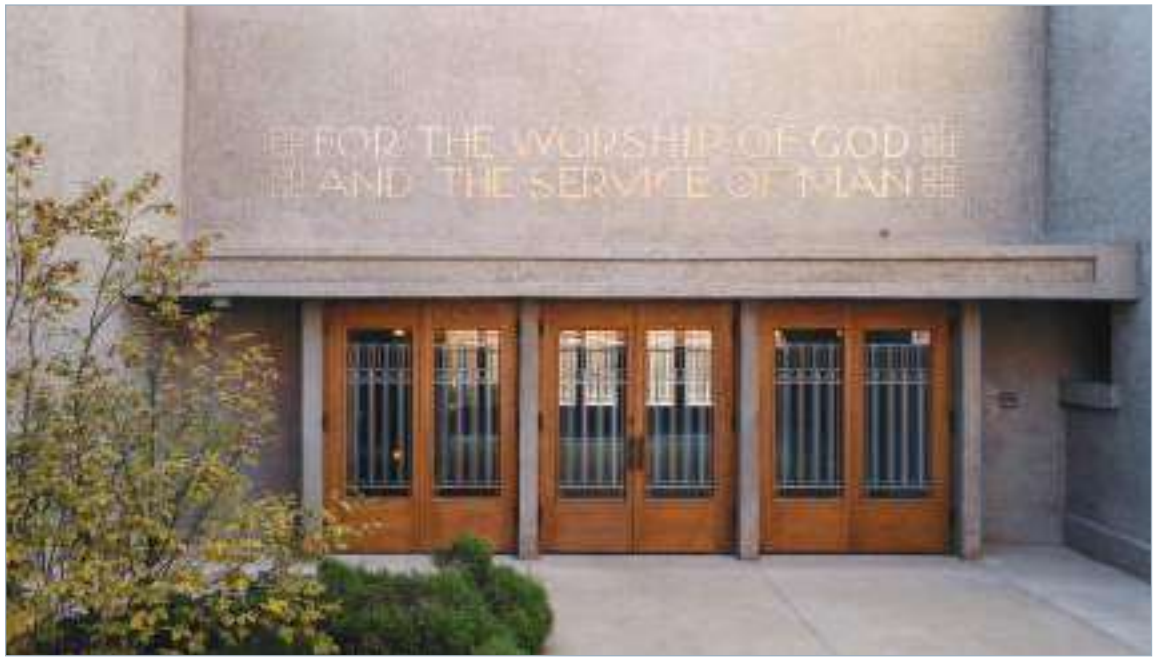
The auditorium/worship space of the temple section accommodates four hundred people in multiple levels of seating and is lit by twenty-five art glass skylights set in a coffered ceiling and bands of continuous windows along the walls at clerestory level. Art glass windows that provide secondary light to the auditorium/worship space light the stairwells at the corners. The auditorium/worship space is also lit by wall sconces and hanging fixtures designed by Wright to reflect and complement the architectural character. Articulating the organization of the overall space are applied oak strips in geometric patterns on sand-float textured plaster walls.

The interior of the Unity House section is organized around a two-story central meeting space which has balconies on the east and west sides. Smaller spaces lit by art glass windows are located under the balconies. The ceiling contains a central panel with art glass skylights. The wall surfaces with applied oak strips are similar to those in the main auditorium/worship space, but have a simpler color palette. Wright also designed all the furniture throughout Unity Temple, which is still in place, though being movable, is not considered part of the nominated property. The extension of the architectural design into the design of the furnishings creates a complete and organically unified environment.

The geometry used is based on the square and double square, creating a complex web of space, articulated by a novel and inventive use of decorative oak striping and color panels. The abstract spatial definition of the auditorium/worship space and school symbolically expresses the Midwestern American type of liberal Unitarianism.

Unity Temple, art glass clerestory windows with stylized concrete piers beyond.
Photograph courtesy of the Unity Temple Restoration Foundation.

Unity Temple, view of east entrance (center) showing cubic form of Unity House (left) and Unity Temple (right).
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

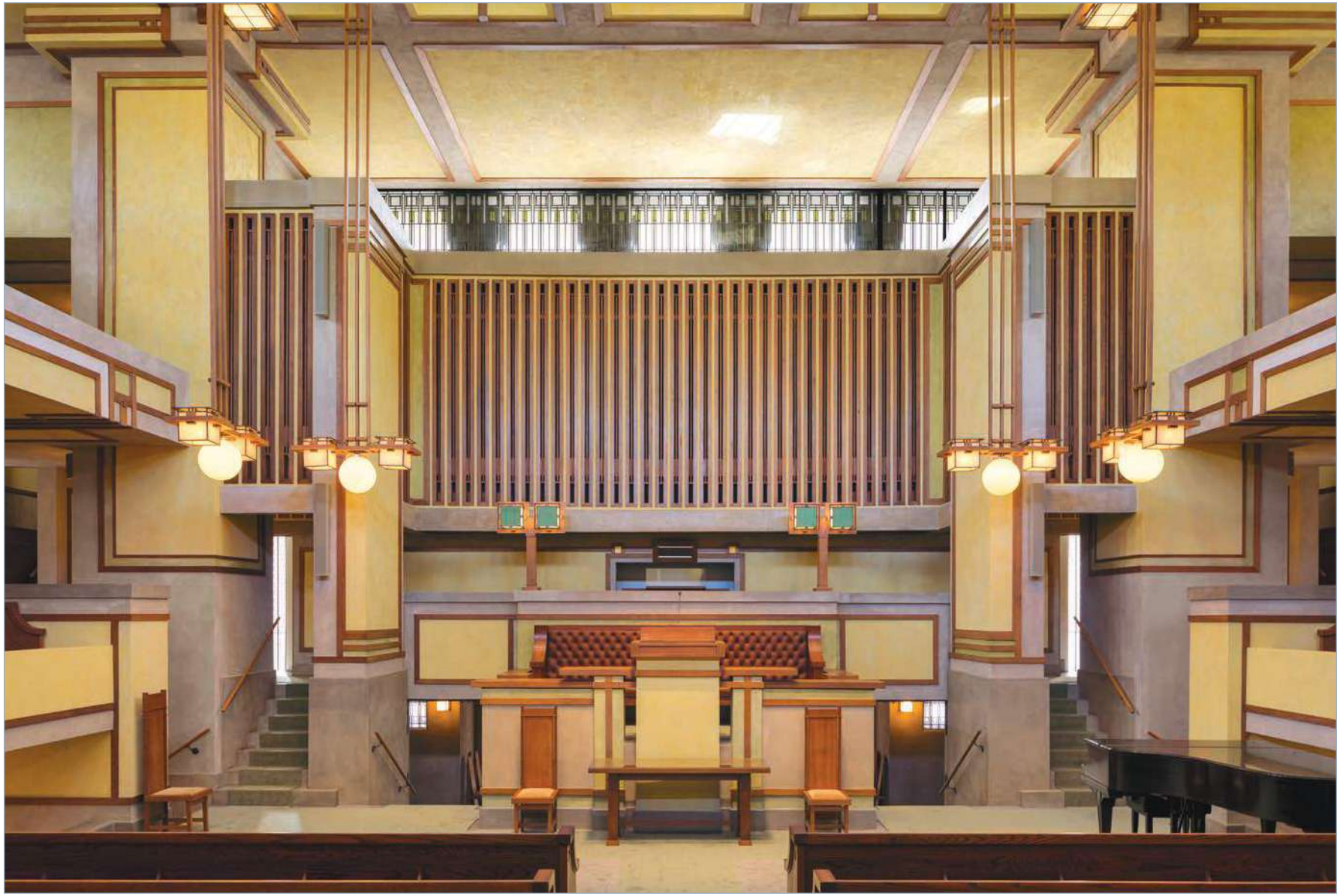


Unity Temple, view of west terrace and entrance doors to foyer.
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

Unity Temple, coffered skylight of the auditorium interior.
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

Unity Temple, view of entrance foyer from west doors showing stairs leading to Unity Temple at left.
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

Unity Temple, view facing to the west of auditorium/worship space interior showing three levels of seating, coffered art glass ceiling, art glass clerestory windows, and pulpit (left).
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.



Unity Temple, view facing to the south of auditorium/worship space interior showing art glass clerestory windows, pipe organ screen, and pulpit, with stairs leading up to balcony seating and down to entrance foyer beyond.
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

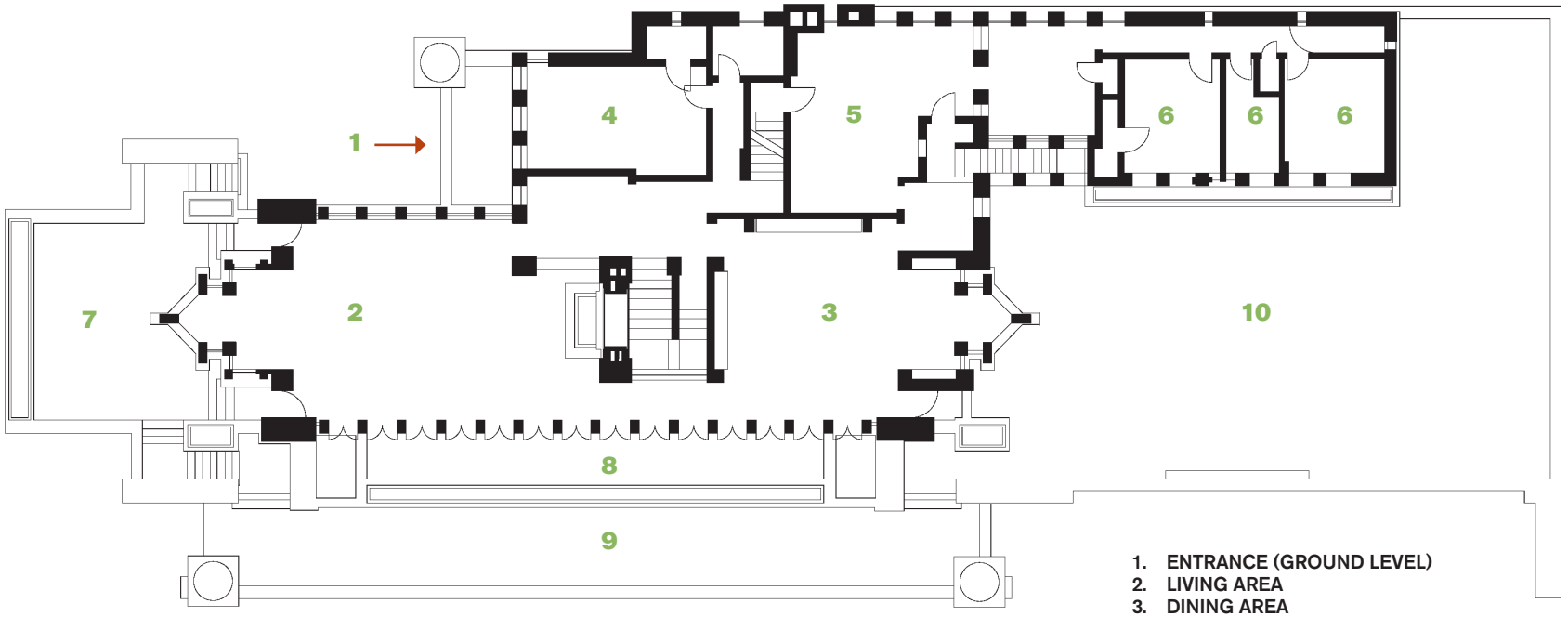
Unity Temple, view facing to the north of Unity House interior showing coffered art glass ceiling, second floor art glass office windows, and entrance foyer beyond.
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

Unity Temple, view facing to the southwest of auditorium/worship space interior showing corner columns (around which stairs lead to balcony seating), art glass ceiling lighting fixtures, decorative wood striping, art glass clerestory windows, and pulpit (lower left).
Photograph by Tom Rossiter, courtesy of Harboe Architects, 2017.

2.a: FREDERICK C. ROBIE HOUSE
CHICAGO, ILLINOIS

Photograph courtesy of the Frank Lloyd Wright Trust

FREDERICK C. ROBIE HOUSE
Plan of Main (Second) Floor



1. ENTRANCE (GROUND LEVEL)
2. LIVING AREA
3. DINING AREA
4. GUEST ROOM
5. KITCHEN
6. SERVANTS QUARTERS
7. PORCH
8. BALCONY
9. ENCLOSED COURT BELOW
10. AUTOMOBILE COURT

Purna Nanawala, delineator.

THE FREDERICK C. ROBIE HOUSE completed in 1910, is located on the University of Chicago campus in the Hyde Park neighborhood of Chicago. This is a mixed-use urban area with residential and some larger scale institutional buildings. The terrain is flat with mature street trees. The house sits on and occupies most of a 18m by 55m lot at the northeast corner of Woodlawn Avenue and East Fifty-Eighth Street which comprises the proposed boundary for the nomination. The 1.315ha buffer zone surrounds the property, and the areas beyond the buffer are further protected by the Hyde Park-Kenwood Historic District, the City's Planned Development Area 43, and a residential zoning district (see page 288).

The three-level house is distinguished by its overall horizontal form, containing an elongated series of rooms and dedicated functional areas constructed of tawny, red-orange Roman brick with stone trim under low hipped roofs with a striking cantilevered overhang. To further emphasize the horizontality, the brick's horizontal joints are filled with a cream-colored mortar, in contrast with the brick-colored mortar of the small vertical joints. From a distance, this creates an impression of continuous lines of horizontal color and minimizes the appearance of individual bricks. Oversized brick corner piers and a central chimney core flank bands of windows at each level. Continuous balconies at the main and upper levels have casement windows of geometrically patterned art glass. A brick wall encloses an automobile court.

The horizontal lines of the walls, windows, projecting porches, and roofs contribute to the horizontality of the overall design. The front door and main entrance are partially concealed on the northwest side of the building beneath an overhanging balcony. Inside the low doorway, a vestibule leads to the rooms of the ground floor and to a dark and narrow stairway that rises behind the chimney core.

Ascending the staircase to the main floor, one emerges into the major open living space, interrupted only by the freestanding chimney whose core with its fireplaces on both sides is the central organizing element of the space. The dining room is to the east, and the living room is to the west. Art glass casement windows open out from the prow-like projections at the east and west ends. A large band of art glass casement windows opens out to a continuous balcony on the south side. The complex ceiling treatment reinforces the sense of open, dynamic space. It is lower at the sides of the room and punctuated with wood screens fitted with translucent glass that filter recessed lighting. The ceiling then steps up at the room's center, where oak strips cross the ceiling, repeating the rhythm of the window bays. The third floor, with bedrooms, overlaps the center of the building and features another balcony facing west and art glass panels in the windows.

The entire building is approximately 836m^2. The steel beams within the ceilings and floors carry most of the building's weight to piers at the east and west ends, leaving little load bearing for the exterior walls, and enabling them to be filled with doors and windows that accentuate the open plan.

The Robie House is the most famous and most influential of Frank Lloyd Wright's Prairie houses. The term "Prairie" has been applied to Wright's houses designed during the first decade of the twentieth century for the analogy between the horizontality of the designs, which contrasted with typical residential architecture of the period, and the expansive qualities of the Midwest prairie landscape. The Robie House creates a powerful image of shelter through the means of sliding and interpenetrating volumes and planes that create deep recesses under the overpowering lines of the roofs. The single, open, and continuous space forming the living and dining rooms on the main floor, enabled by the use of steel C-channel beams incorporated in the length of the cantilevered roof, provided a radically different conception of modern living space for its period.

Equally significant is the seeming disintegration of the traditional solid containing walls into intersecting planes that, through the use of glass, define rather than contain space. The Robie House displays an unusual and early integration of heating and lighting technology within the structural and decorative framework of the building. The inclusion of an attached three-car garage and automobile court is an early example of the accommodation of the automobile as an integral component of modern residential architecture in the United States.

The Robie House stands as a fully unified architectural work in which all the furnishings (carpets, lighting, furniture, windows, technology, etc.) realize a total vision of spatial openness, dynamic form, and abstraction of architectural elements.

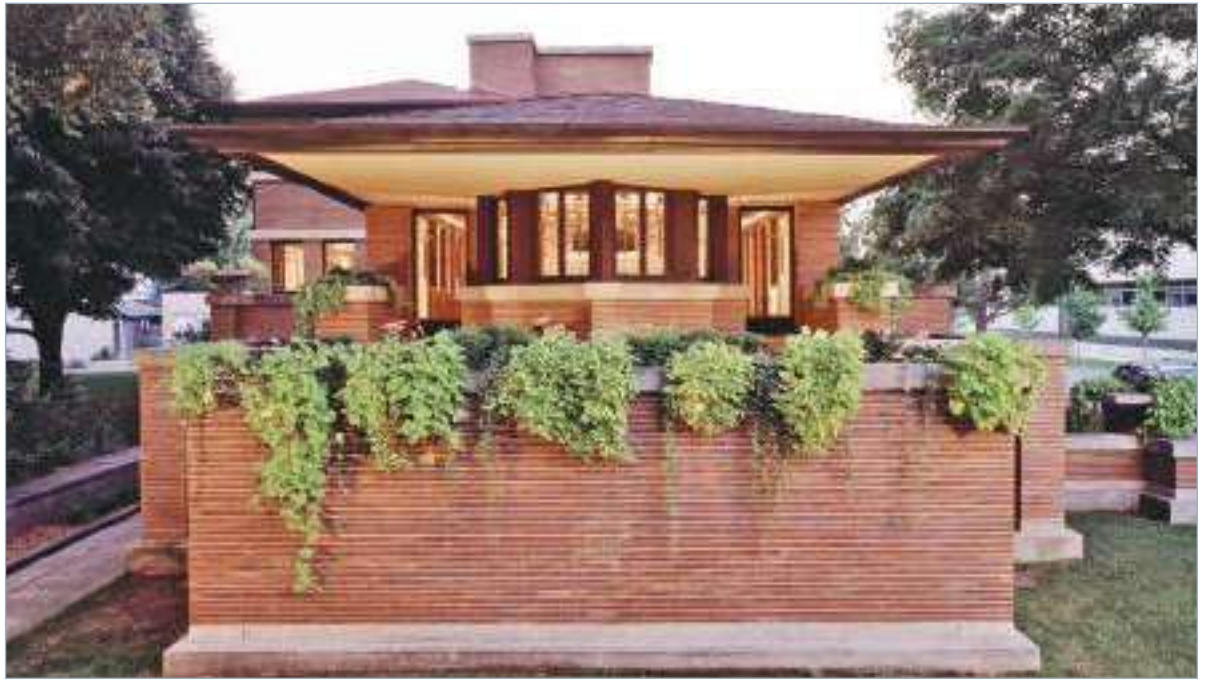
Frederick C. Robie House, view showing cantilevered roof eaves over porch at northwest corner and raked Roman brick piers capped with limestone.
Photograph courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view looking up from courtyard showing raked Roman brick and mortar detail of piers.
Photograph courtesy of Frank Lloyd Wright Trust.

Frederick C. Robie House, view showing deep eaves over third floor bedroom art glass windows at northwest corner.
Photograph courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view showing northeast corner of house with ground-level concealed entrance (left) and main level's northern prow and north porch with cantilevered roof over both.
Photograph courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view facing south of entrance foyer and stair leading to the open plan of the main level.
Photograph by Joe Barett, courtesy of the Frank Lloyd Wright Trust.



Frederick C. Robie House, view of the north elevation of the house showing porch and dramatic cantilever of roof over the north prow, concealed entrance to the house (left) and building-length balcony of main level (right).
Photograph courtesy of the Frank Lloyd Wright Trust.

Robie House Living Room, view facing north showing prow feature of main level, wood striping of ceiling treatment, spherical sconce light fixtures, and art glass casement windows and porch doors.
Photograph by James Caulfield courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view facing to west showing main level ceiling treatment, art glass balcony doors, and exterior planting boxes beyond.
Photograph by James Caulfield courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view facing south of main floor living area showing fireplace, wood striping of ceiling treatment, art glass casement windows (left), and art glass doors of full-length balcony (right).
Photograph courtesy of Harboe Architects.

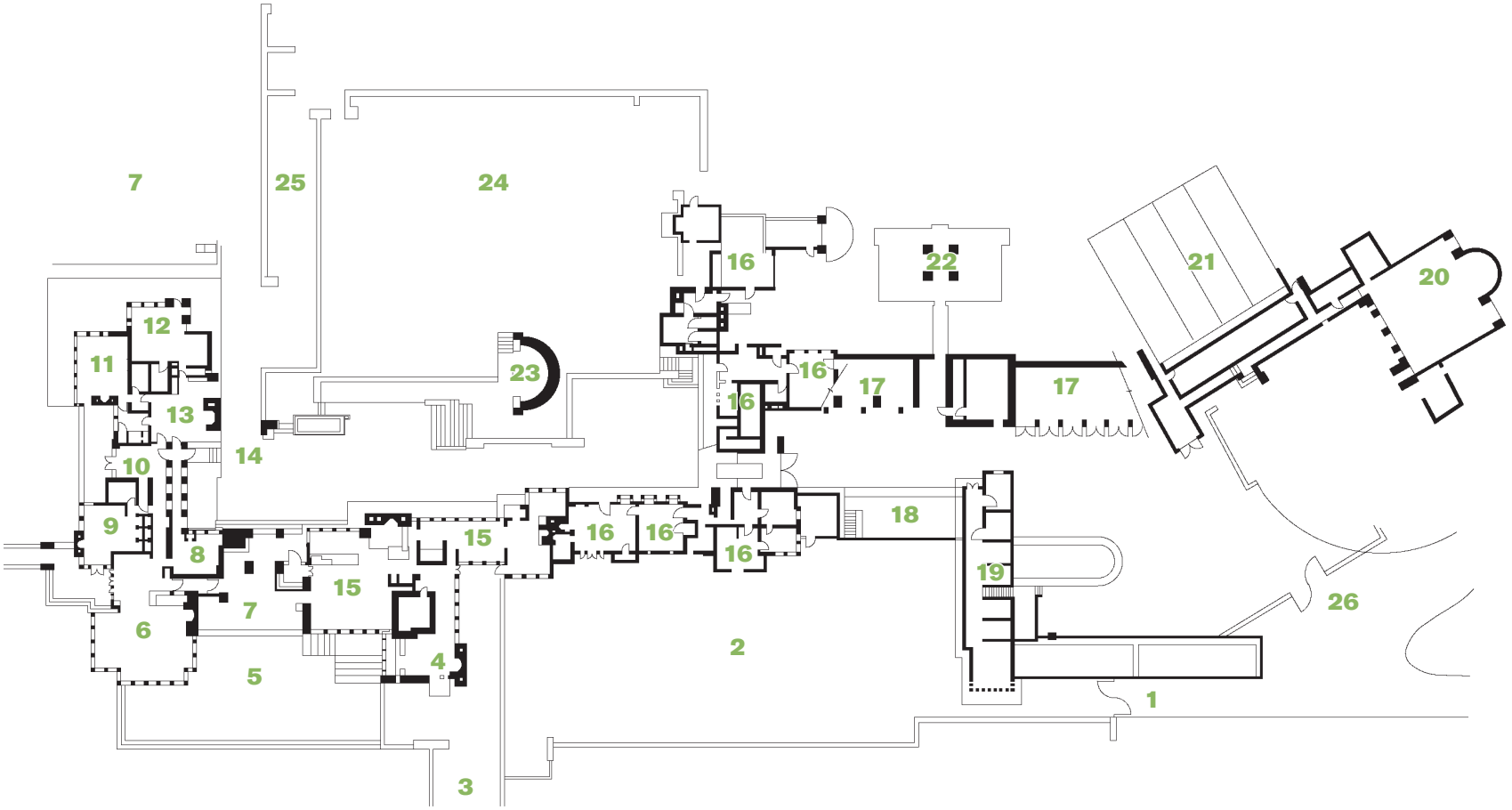
Frederick C. Robie House, view of south elevation showing main level's south prow and its cantilevered roof eaves, third floor bedroom level, and courtyard with staff quarters over former garage (now museum gift store).
Photograph courtesy of Harboe Architects.

Frederick C. Robie House, view facing north of dining area, showing built-in buffet furnishings and screen partition of main stairway leading up from entrance foyer.
Photograph courtesy of Harboe Architects.

2.a: TALIESIN
SPRING GREEN, WISCONSIN

Photograph by Elevate Media, courtesy of the Frank Lloyd Wright Foundation.

TALIESIN
Site Plan at Ground Level



1. MAIN ENTRANCE
2. COURT
3. PORTE-COCHÈRE (BELOW)
4. OFFICE
5. COURT
6. LIVING ROOM
7. TERRACE
8. KITCHEN
9. GUEST ROOM
10. LOGGIA
11. MRS. WRIGHT'S BEDROOM
12. MR. WRIGHT'S BEDROOM
13. SITTING AREA
14. ENTRY
15 STUDIOS
16. APARTMENTS
17. GARAGE
18. GARAGE COURT
19. STABLES (NOW OFFICES)
20. FORMER MUSIC STAGE
21. FORMER CHICKEN COOP
22. UNDERGROUND ROOT CELLAR
23. STONE SEAT
24. HILL GARDEN
25. TERRACED GARDENS
26. GATE

Purna Nanawala, delineator.

CONSTRUCTION OF TALIESIN in Spring Green, Wisconsin, to serve as a home and studio for Frank Lloyd Wright, was begun in 1911. Though a second home and studio for winter use, called Taliesin West, was built in Arizona beginning in 1938, Taliesin remained Wright's summer home and studio. Rebuilt and expanded after two major fires, it grew and evolved over a half century under Wright's direction.

Taliesin lies four kilometers south of the village of Spring Green. The area of the Taliesin property proposed for inscription is 4.9ha. It includes the original Wright house and studio and the immediate landscape within the drive that circles the house.

The buffer zone encompasses approximately 200.899ha of land. It is bounded on the north by the Wisconsin River, on the south by State Highway 23, on the east by a ridge of three connected, wooded hills (known as the Welsh Hills and owned to the ridgeline, which is approximated by the cadastral boundary, by the Frank Lloyd Wright Foundation), and on the west by a cadastral boundary that runs along a ridgeline from a hill at the north end and south to Highway 23. West of this boundary the land slopes down from the ridgeline; although owned by the Foundation, it is not visible from the house due to the topography, and is therefore not included in the buffer zone (see pages 74 and 75).

Both State Highway 23 and County Road C run through portions of the buffer zone, which is half rolling terrain and half relatively flat agricultural land characterized by a mixture of open fields and stands of mature temperate hardwood forest, all set amidst the rocky bluffs and rolling hills of the Wisconsin River valley. Within the buffer zone are several other structures designed by Wright, including the Hillside Home School (1901-1903, and later alterations), with its drafting studio, galleries, and theater; Midway Barn (ca. 1938 and later), including shed, silos, and housing units; "Tan-y-deri," the residence for Wright's sister (1907); and the related "Romeo and Juliet" windmill (1896-1897, reconstructed 1992). These other buildings are at some distance from the main house. The landscaped grounds, roads, dam, and pond, with the subsidiary structures, provide the setting for the main Taliesin structure. (See Section 3.1.c for a discussion of why the subsidiary buildings are not considered to be part of the site's Outstanding Universal Value.)

The Taliesin house consists of living quarters once used by the Wright family, guest rooms, apartments for the Frank Lloyd Wright Foundation staff and apprentices, storage facilities, carports, offices and drafting studio, root cellar, gardens and terraces. Altogether the grouping encompasses some 3,437m^2 with the entire composition closely integrated with the hill on which it is situated. The structure is about 18m above Jones Creek, and the hill rises more than 30m above the valley floor.

The main house forms an enclosed, loosely U-shaped courtyard. The building is on the brow of the hill, leaving the crown, or top, undeveloped and the hill gently rising above as a constant presence in the experience of the house. Located in the valley settled by his Welsh maternal family who had a tradition of naming local features, Wright named this house in 1911 with the Welsh name Taliesin meaning "shining brow."

A tower on the house provides a point of orientation and a belvedere, an eccentric vertical element staking the building to the site. From it, the house unwinds in a spiral around the hill and out to the original entrance. The materials and plan emphasize the building's informality, its irregularity, and its intimate relation to the natural surroundings. Each wing is loosely organized within itself and joined to the next in a meandering yet highly controlled fashion. British architectural historian John Sergeant noted the circulation "around, inside and out, up and down, from dark to light, along the contours" of the property.

The exteriors of the buildings consist of local Wisconsin limestone, which form chimneys and walls, alternating with sand-finished stucco on wood frame cypress fascia and base trim boards, and cedar shingled roofs. The interiors use similar materials: cypress flooring alternates with limestone paving and cypress is used for trim, shelving, and cabinets. The walls are sand-textured plaster. Covered stone passageways link the buildings.

Views of the surrounding landscape dominate the experience of the house, beginning with a preliminary view of the valley and river from the loggia. From the corner entrance of the living room, there is another vista up the pastoral Jones Valley, this time across the room and over the dining terrace. A twelve meter cantilevered terrace, known as the bird walk, extends perpendicularly from one of the alcoves in the living room. Almost all the rooms are connected to each other, and entered, at their corners. The lines of sight thus carry diagonally across from room to room to emphasize the sense of space and to extend the exterior

views that relate to the dynamic interior. Exterior balconies and terraces for both private and public spaces further emphasize the connections to the natural surroundings. In addition to the built-in cabinets, shelving, and seating, Wright designed most of the furniture in the building.

Also included in the nominated property is the enclosed hill garden designed by Wright that mirrors one for vegetables on the other side of the drive, providing a transition from the working farmlands. On the other side of the house he designed an exedra around a grove of oak trees, at the center of which is a rectangular pool with a fountain on axis with the retaining wall of the hill's crown. Wright dammed the stream at the base of the hill to raise the water in the valley to be within sight of Taliesin and create a pond for ducks and geese. The dam made a waterfall with enough force to drive a hydraulic ram that lifted the water to a stone reservoir on the hill just above the house. From there, the water was channeled into a series of pools and fountains in the more formal hill garden before it flowed farther down the slopes to irrigate the vegetable gardens. On the way, it passes through another rectangular basin under the loggia. The water coming down the hillside appears to be making its way to the river, which can be seen through the opening of the loggia. The careful, sensitive site planning and the use of many native materials reinforce Taliesin's complete integration of building and landscape.

Taliesin, view to the southeast showing the so-called "Welsh Hills" which are owned to the ridgeline by the Frank Lloyd Wright Foundation and lie along the eastern border of the Taliesin Estate.
Photograph courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the northwest taken atop the so-called "Welsh Hills" showing Taliesin (lower right) and the ridgeline along the horizon that comprises the west boundary of the buffer zone.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, Spring Green, Wisconsin – Topographical Map

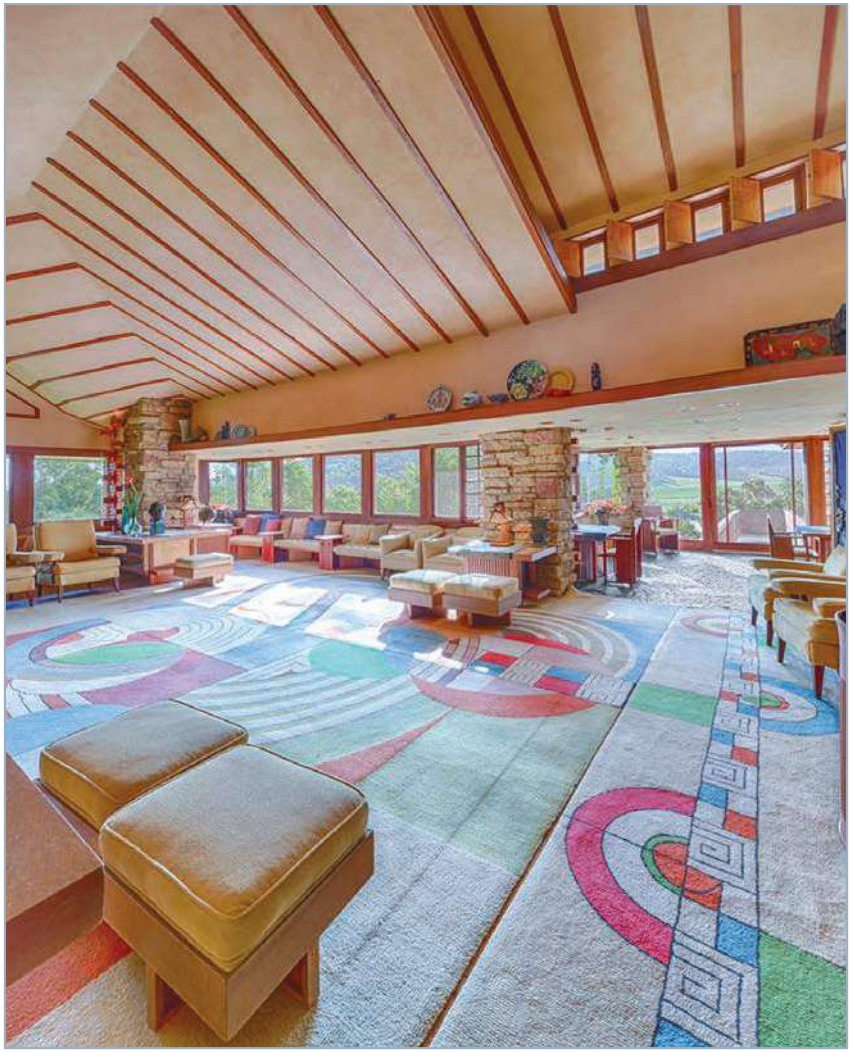
Taliesin, view to the southwest showing length of balcony doors leading from loggia (right), with Olgivanna Lloyd Wright's bedroom at far end.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the west from Frank Lloyd Wright's private quarters out onto the hill garden with belvedere (left), Wright's studio and office (right), and bridge of apprentice apartments connecting the two structures beyond.
Photograph by Bud Dietrich, courtesy of Taliesin Preservation, Inc.

Taliesin, view looking west showing the Wrights' private quarters (left), loggia balcony over rehabilitated apprentice apartments (center), and the cantilevered "bird walk" of the living room (right).
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the southwest framed by the stone walls of the porte-cochère with steps leading to the formal entrance to the house at right.
Photograph by Steve Sikora, 2018.

Taliesin, view to the northwest taken atop the so-called "Welsh Hills" with State Highway 23 in foreground that transects the buffer zone and is the eastern boundary of the National Historic Landmark.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.



Taliesin, view to the east of living room showing wood ceiling treatment, stone piers, and view through ribbon windows to Welsh Hills beyond.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the west of living room showing dining area (center), fireplace with inglenook seating and music stand (right), and view to second floor apartment level (upper right).
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the north of guest bedroom showing intricate ceiling treatment, stone piers and walls, and fireplace (right).
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the east of Olgivanna Lloyd Wright's bedroom showing fireplace (left) and doors leading out on to loggia terrace, with view to Welsh Hills beyond.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the north of Frank Lloyd Wright's bedroom showing full-height plate glass windows looking out on to hill garden, fireplace (center), and door leading to sitting room (right).
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the north of Frank Lloyd Wright's studio and office showing intricate wood ceiling treatment, stone vault (center), and view through windows (right) to entrance court one level below.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

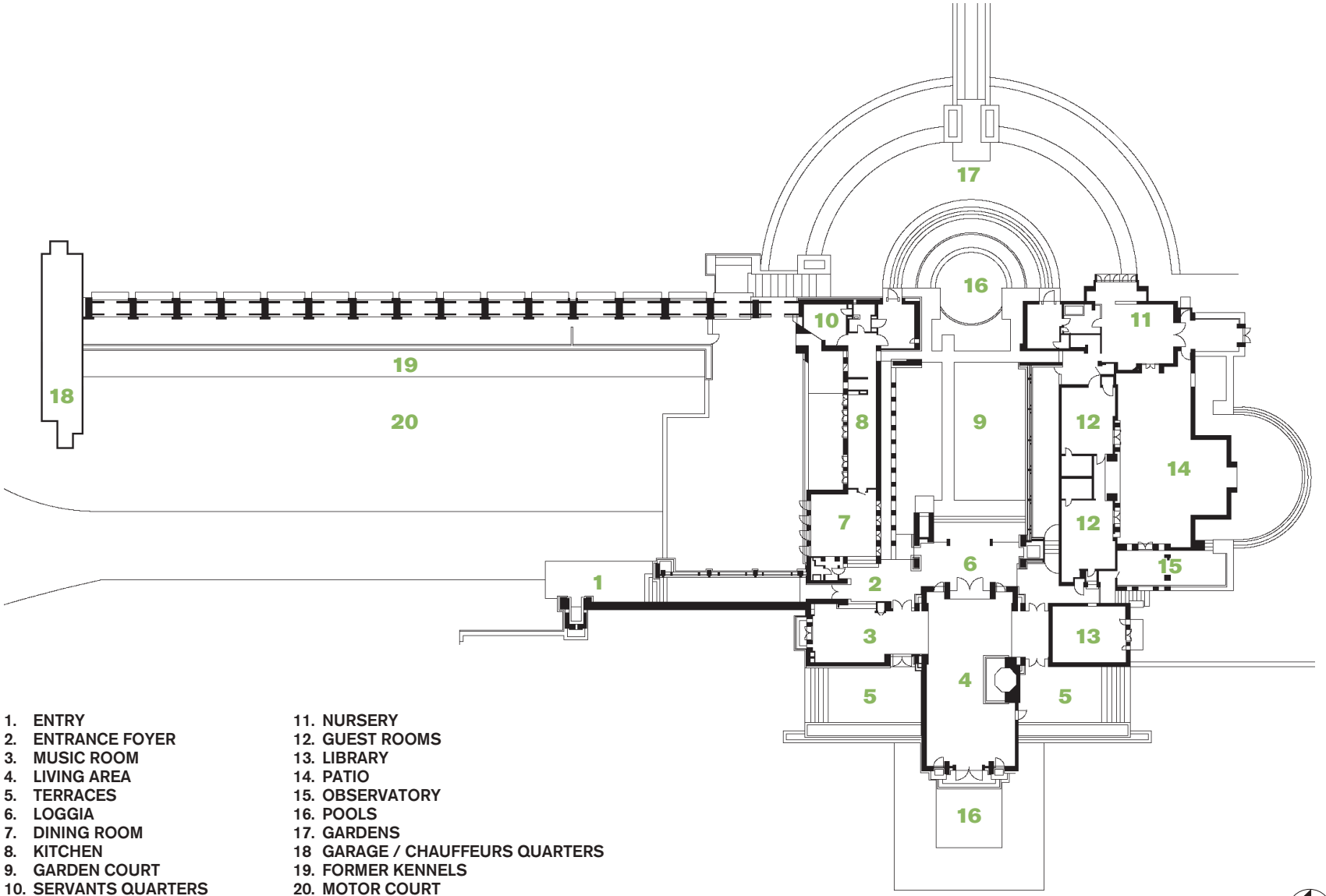
Taliesin, view to the southwest of stairs leading from entrance court to terrace of Wright's private quarters.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin, view to the north taken from drive approaching house from estate entrance off State Highway 23, near the southwest corner of the buffer zone.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

2.a: HOLLYHOCK HOUSE
LOS ANGELES, CALIFORNIA

Photograph by Joshua White, courtesy of Hollyhock House.

HOLLYHOCK HOUSE
Plan of Ground Level



1. ENTRY
2. ENTRANCE FOYER
3. MUSIC ROOM
4. LIVING AREA
5. TERRACES
6. LOGGIA
7. DINING ROOM
8. KITCHEN
9. GARDEN COURT
10. SERVANTS QUARTERS
11. NURSERY
12. GUEST ROOMS
13. LIBRARY
14. PATIO
15. OBSERVATORY
16. POOLS
17. GARDENS
18 GARAGE / CHAUFFEURS QUARTERS
19. FORMER KENNELS
20. MOTOR COURT

Purna Nanawala, delineator.

HOLLYHOCK HOUSE, COMPLETED IN 1921, sits on the crown of Olive Hill at the eastern edge of the Hollywood district of Los Angeles, California. Built around a courtyard, the house seamlessly melds exterior and interior living space, providing each room with outdoor space in the form of terraces at both ground and roof levels. Its unusual form is a response to its location in Southern California and its private-public use.

The nominated boundary for Hollyhock House includes the house, garage, and chauffeur's quarters along with the surrounding property on Olive Hill that was bequeathed to the City of Los Angeles by the original owner, Aline Barnsdall (now known as Barnsdall Park), that is within the National Historic Landmark designation. This area includes the immediate setting for the house as well as protected areas and structures on the lower slopes of Olive Hill. These latter structures include the Spring House and Residence "A"—both designed by Wright; the Schindler Terrace (1924); the Junior Arts Center (1967); and the Municipal Art Gallery (1971). The Arts Center and Art Gallery are sited low on the hill on the eastern edge of the property and are not clearly visible from Hollyhock House.

The buffer zone consists of the remainder of Barnsdall Park on the north and the surrounding urban area below Olive Hill that is bounded by Hollywood Boulevard, West Sunset Boulevard, North Vermont Avenue and North Edgemont Street. This area is protected by local zoning law that restricts the height of new construction, a limit identified by the City that will prevent construction that could interfere with views from Hollyhock House.

The house, a series of cubic and rectilinear forms surrounded by semicircular garden features, is set on a cast-concrete base and has walls of hollow terracotta tile covered with stucco that rise in almost monolithic fashion, recalling indigenous Central American constructions. Cast-concrete ornamentation in the form of stylized hollyhocks rests on belt courses. Masonry walls covered with stucco extend out from the major ground floor rooms to enclose terraces. The four wings of the house enclose a central courtyard. Exterior stairs at the west end ascend to roof terraces that provide views extending from the Hollywood Hills to the Pacific Ocean.

Hollyhock House was built during the first peak of excitement over Hollywood's role in the fast-growing motion picture industry. Within this cultural context of movie palaces, actors, drama, and fantasy, Hollyhock House, although designed as a residence, was conceived as the nucleus of a large art and cultural center. The center was to include a cinema, artists' studios, and a performance theatre, plus separate houses for those who would run the center. Although only part of the original plan was realized, the house on its own embodies a degree of symbolic expression normally reserved for buildings of a more public nature. Its central courtyard, in fact, was designed to provide space for theatrical performances. Major rooms on the main floor include the dining room, the music room, the large, sunken living room and a large fireplace surmounted by a cast-concrete bas-relief. A gold-tiled pool surrounds the hearth, which is further accented by an art glass skylight.

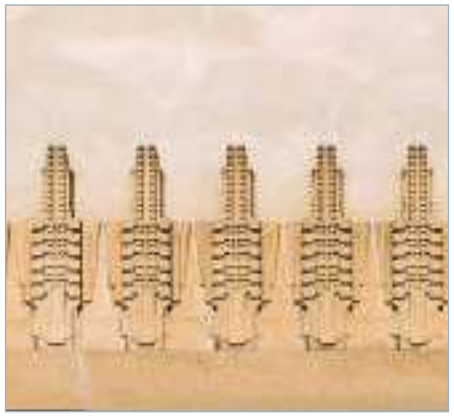
Hollyhock House uniquely adapts local Spanish patio house traditions combined with references to ancient Amerindian Maya forms and the symbolic treatment of landscape forms. The sloping planes of the four wings of Hollyhock House create a man-made "crown" for Olive Hill, while the patio court in its center forms a crater where the images of mountain and water are brought together to create a metaphor of Los Angeles itself. The stream that originally flowed through the patio court, fed by an underground source, passed underground again and finally reappeared in the reflecting pool just beyond the living room. Inside the house, water emerges in the pool around the hearth which is set under a skylight. As the exterior form marks the building as an important and resonant element in its regional and cultural setting, so too the interior finishes and fittings enhance the overall artistic effect using the hollyhock as an abstracted decorative theme. Interior spaces, ranging from the double-square living room looking toward the Pacific Ocean to the child's playroom looking south, feature leaded-glass windows and furniture designed by Wright.

The Spring House, built of cast concrete and stucco over wood frame, is similar in architectural character and stylized ornamentation to the main house. This small structure and water system were intended to culminate in a cascade that would empty into a large pool near the edge of the property, a feature never executed. Residence "A," built in conjunction with Hollyhock House, is a two-and-one-half story building sited on a slope to the east and constructed of hollow clay tile finished in stucco with some sections of wall framed in wood.

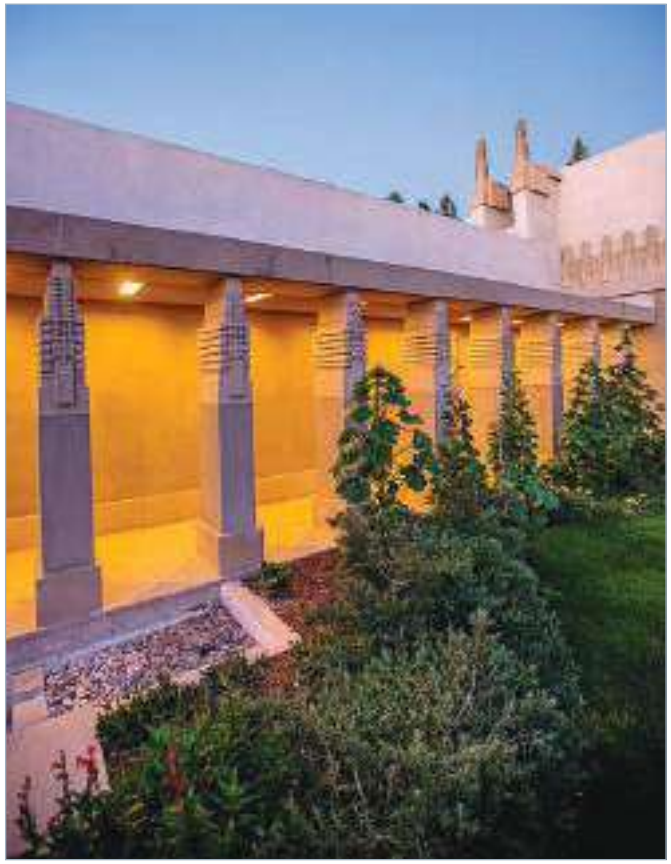
Hollyhock, view to the southwest showing hollyhock motif of frieze detail over pool to the east of the garden court, with gallery beyond
Photograph by Scott W. Perkins, courtesy of the photographer.

Hollyhock House, view to the southeast from rooftop terrace showing garden court with loggia and stair leading to rooftop (center), hollyhock themed colonnade (right), and Los Angeles skyline beyond.
Photograph by Joshua White, courtesy of Hollyhock House.

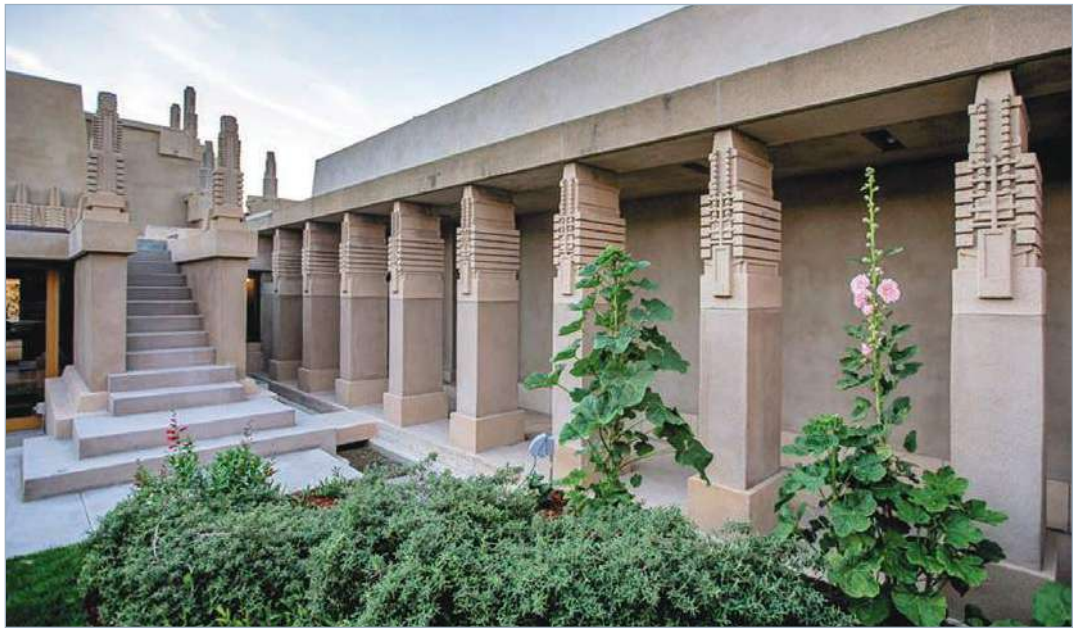
Hollyhock House, view showing formal entrance door as approached from motor court.
Photograph by Elizabeth Daniels, courtesy of the photographer.



Hollyhock House, detail of stylized hollyhock motif.
Photograph by Joshua White, courtesy of Hollyhock House.



Hollyhock House, view to the northeast showing colonnade with hollyhock motif of rooftop stair shown above.
Photograph by Elizabeth Daniels, courtesy of the photographer.



Hollyhock House, view to the northwest showing steps from garden court to rooftop terraces (left) and hollyhock themed colonnade (right).
Photograph by Elizabeth Daniels, courtesy of the photographer.

Hollyhock House, view from the courtyard into loggia and living room.
Photograph by Joshua White, courtesy of Hollyhock House.

Hollyhock House, view of living room showing raised sitting area at left.
Photograph by Joshua White, courtesy of Hollyhock House.

Hollyhock House, living room fireplace.
Photograph by Allyson Unzicker, courtesy of Hollyhock House.

Hollyhock House, view from entry into dining room.
Photograph by Allyson Unzicker, courtesy of Hollyhock House.

Hollyhock House, view looking westward of the pool in foreground and garden court beyond.
Photograph by Joshua White, courtesy of Hollyhock House.

Hollyhock House, view to the northwest doors leading from living room to loggia.
Photograph by Elizabeth Daniels, courtesy of the photographer.

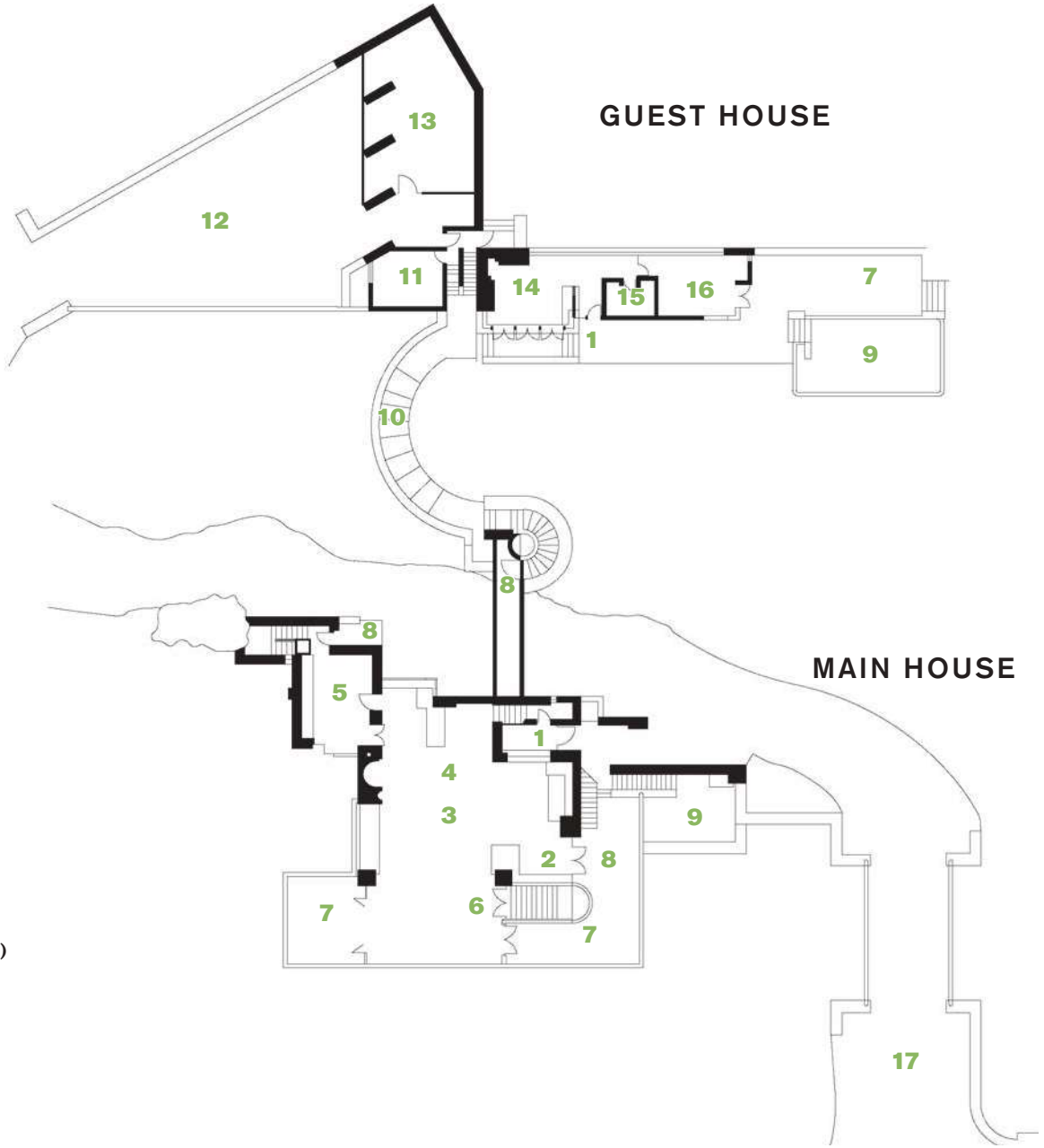
Hollyhock House, detail showing art glass doors (left) and art glass windows (right) flanking hollyhock themed column.
Photograph by Larry Underhill, courtesy of Hollyhock House.

Hollyhock House, view from rooftop terrace to the southeast showing south patio and semicircular terrace.
Photograph by Elizabeth Daniels, courtesy of the photographer.

2.a: FALLINGWATER
MILL RUN, PENNSYLVANIA

Photograph by Robert Ruschak, courtesy of Western Pennsylvania Conservancy

FALLINGWATER
Site Plan at Ground Level



1. MAIN ENTRY
2. LIBRARY/STUDY AREA
3. LIVING AREA
4. DINING AREA
5. KITCHEN
6. HATCH
7. TERRACE
8. ENTRY
9. POOL
10. CANOPY STAIR TO GUEST HOUSE
11. SERVANTS SITTING ROOM
12. MOTOR COURT
13. FORMER CARPORT (NOW THEATER)
14. LIVING AREA
15. BATH
16. BEDROOM
17. ENTRANCE DRIVE

Purna Nanawala, delineator.

FALLINGWATER IS LOCATED in southwestern Pennsylvania, six-and-one-half kilometers south of the village of Mill Run in the Allegheny Mountains. It is a lightly populated area with high elevations, deep gorges, and numerous waterfalls, and is home to diverse plants and wildlife. Built as a weekend retreat for Edgar and Liliane Kaufmann, Fallingwater encompasses approximately 650m^2, about half of which is terrace area. It was constructed between 1936 and 1939. The main house, finished in 1937, rises three stories, with reinforced concrete floor slabs cantilevered over the upper waterfall of Bear Run, the stream running through the property. Spacious terraces articulate the house at each level. A massive chimney of native sandstone anchors the composition. The sound of water is present throughout the site and within the house.

The proposed 11.212ha boundary for the property includes the section of the entry drive now used by visitors and the bridge, the main house, the guest wing, car ports and staff quarters as well as the falls of Bear Run and the immediate gorge surrounding the built structures. The buffer zone is 282.299ha encircling the boundary. Within the buffer zone are the visitor center, parking areas and other structures used to carry out the site's mission. While the National Historic Landmark is defined by the Kaufmanns' original ownership, the proposed buffer zone reflects current cadastral boundaries, and the Bear Run Nature Reserve extends beyond the buffer in all directions. The bulk of the buffer zone is mature temperate forest just as it was when the Kaufmanns built Fallingwater.

Stone, quarried less than 152m from the house, was used for all vertical, load-bearing piers and walls. Reinforced concrete was used to create the stack of horizontal balconies, or trays, cantilevered dramatically from the rock ledge over the bed of the stream. The trays provide the floors for the living spaces in the house, and are continuous inside and out. Doors and windows of plate glass in steel sash make the only distinction between interior room and outdoor terrace. The lowest tray forms the main floor of the house and contains a single space combining the functions of living, dining, reception, and library. The flexible, open plan is loosely organized within a central space defined by a square recess with a light screen in the ceiling. The middle tray contains bedrooms, each with an adjacent terrace and stone fireplace. The top tray forms an aerie with the overarching branches of the tall oak trees.

The materials used inside are the same as those used outside, creating a continuity of surfaces and materials that unifies the composition. This feature is reinforced in key places by the actual intrusion of an element from the exterior. The walls and piers are stone; the ceiling, forming the underside of the upper slab, is plastered and painted the same color as the parapets. The floor is covered in flagstone similar in color and texture to the stones in the bed of the stream. The flagstone floors are waxed, except for the upper part of a boulder used in the foundations of the house. Emerging in its raw, natural state as the base of the living room fireplace, its role in anchoring the house is both literal and figurative.

Similarly, the glass hatch under the skylight that opens through the floor and connects to a suspended stairway leading directly down to the stream relates the room directly to the natural world outside. These two features are also both semicircular, a secondary motif in the house. Together, they describe a diagonal line across the room that traces the underlying geometric relation between the building and the stream. The two upper floors are stepped back as they rise, creating the impression that they form part of the natural terrace of the hillside. The third floor can be accessed from within the house or from an external stair from the southwest terrace.

The interior spaces have floors of native flagstone, sandstone walls, and built-in furniture and cabinetry of black walnut. Steel and glass casement windows and doors with frames painted in a rust-red color, which Wright called "Cherokee red," open onto the terraces and flank the chimney, providing a contrasting sense of light and openness against the solid mass.

A curving walk over the driveway leads up the hill to the guest house. A tiered concrete canopy, executed in a single pour of concrete, supported by a single steel upright at each level, covers the walk. A reinforced concrete swimming pool with a small fountain is located to the east of the guest wing. Former staff quarters, now used as office space, and a carport are on the other side of the chimney mass. Like the main house, the guest wing has Wright-designed built-in fittings and furnishings.

Fallingwater, bird's-eye view looking northwest.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, view of entry (center) with trellis beams extending across drive.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, view to the west from east terrace, through living room seating area, to west terrace beyond.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, main floor living area.

Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, music area.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, looking to the north at fireplace and dining area.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, looking to the south at fireplace with living area beyond.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, view down to Bear Run through living room hatch.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, looking south in kitchen.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, view looking north from terrace into master bedroom.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, view looking south in Edgar Kaufmann's bedroom-study.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, guest bedroom looking to the southeast.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, view looking east in Edgar Kaufmann, jr.'s sleeping alcove.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, tiered concrete canopy stair, view looking north form guest house to main house.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, looking southwest across guest house swimming pool.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

Fallingwater, former staff quarters, view looking east from top of drive.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

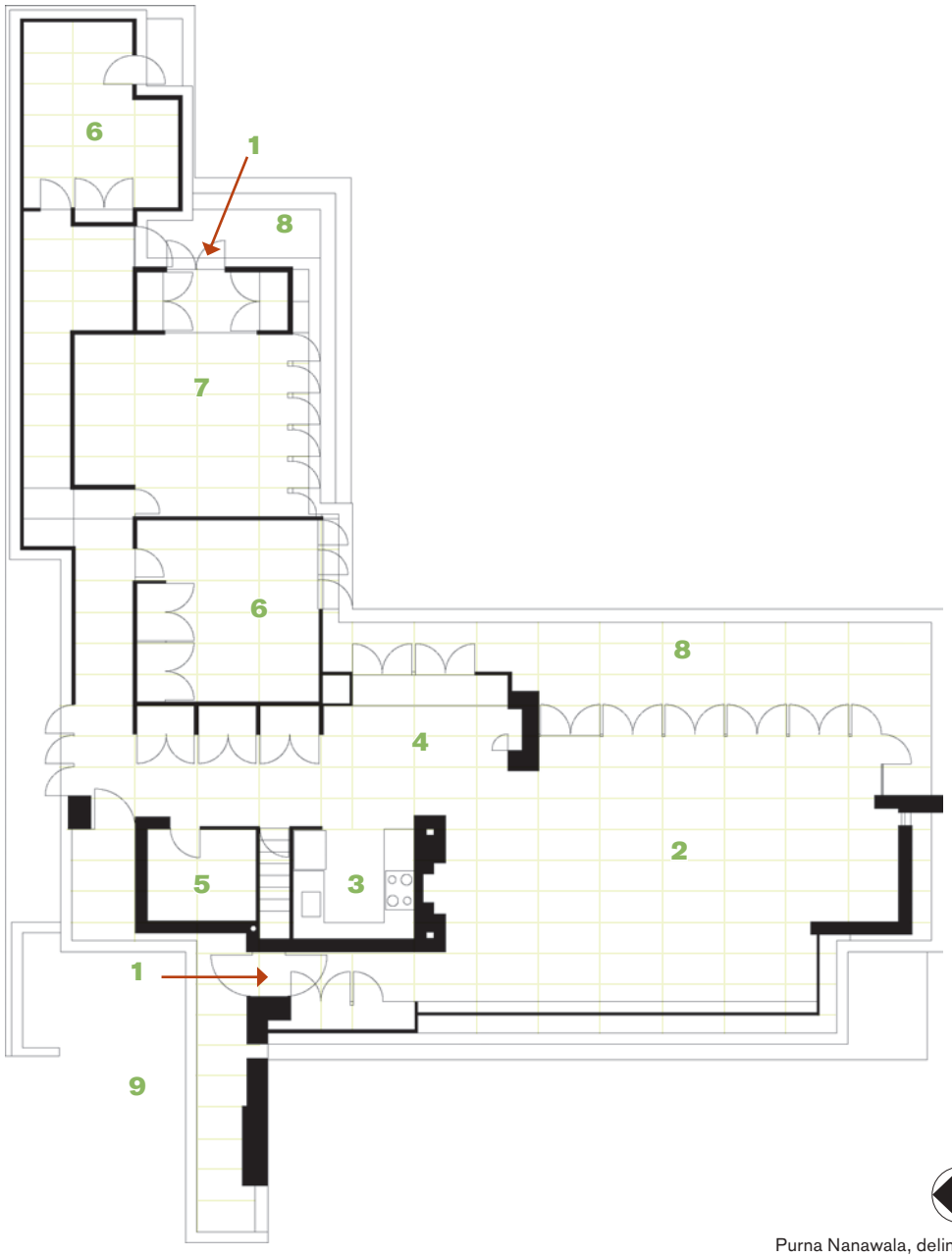
Fallingwater, view to the southwest in guest house sitting room.
Photograph by Christopher Little, courtesy of the Western Pennsylvania Conservancy.

2.a: HERBERT AND KATHERINE JACOBS HOUSE
MADISON, WISCONSIN

Photograph by David Heald, courtesy of James Dennis.

HERBERT AND KATHERINE JACOBS HOUSE
Floor Plan

1. ENTRY
2. LIVING AREA
3. KITCHEN
4. DINING ALCOVE
5. BATH
6. BEDROOM
7. MASTER BEDROOM
8. TERRACE
9. CARPORT



Purna Nanawala, delineator.

THE HERBERT AND KATHERINE JACOBS HOUSE was completed in 1937 and is the first of Wright's Usonian houses. "Usonia" was a term used by Frank Lloyd Wright to describe an architectural vision for average Americans (**U**nited **S**tates **O**f **N**orth **A**merica). Usonian houses were artistic but in the original conception were modest, single-story dwellings, and often, as here, L-shaped to enclose a compactly designed garden. They were built with simple materials, had flat roofs with large overhangs for natural cooling, and were set on a concrete slab with radiant-floor heating. An important characteristic of all Usonian houses is a strong visual connection between the interior and exterior spaces. It is an imaginative structure of low cost for an average American of moderate means living in the suburbs and dependent on the automobile as a primary means of transportation. Standardization in size of building components was an important part of keeping building costs relatively low, and the garage, turned into a carport, was integral to the house's design.

The city of Madison is located in south-central Wisconsin, 196km northwest of Chicago. The Jacobs House is on the northeast corner of Toepfer Avenue and Birch Street, part of a suburban subdivision platted in 1927 but developed largely after World War II. The property was annexed to the City of Madison in 1948. Small lots with detached, two-story, single-family houses characterize the surrounding neighborhood. The landscape of the immediate area consists of maintained lawns with an abundance of shade trees and foundation shrubbery.

The Jacobs House is one story with an L-shaped plan and is small at 144m^2. The house is on the northwestern two-thirds of a double lot; the limit of the 0.139ha double lot is the boundary of the proposed inscription. The 1.286ha buffer zone consists of the adjacent properties and those immediately across the two streets from the house. Areas beyond the buffer zone are also protected from incompatible development by local zoning law. (See map on page 45 and discussion on page 289.)

The house has a flat and noticeably thin roof. The walls facing the street are fabricated of horizontal ponderosa pine boards assembled in reverse board and batten fashion with recessed redwood battens. They are largely solid except for bands of clerestory windows. The walls on the garden side of the house are mainly composed of floor-to-ceiling glass doors and open out onto the terrace and yard. The soffits of the flat roofs extend well beyond the walls. The house rests on a concrete slab that incorporates pipes for technologically innovative integrated radiant floor heating and is inscribed with the lines of the "two by four" (61cm by 122cm) module unit system that Wright used in the design of the house. The slab continues beyond the windows to become an exterior terrace. A dramatically cantilevered carport, the first that Wright designed, projects from the house and covers two entrances, one leading into the living room and the other into the bedroom wing.

Inside the house, the narrow main entrance opens into the expansive living room. The east wall is filled with window-doors that open onto the garden. The interior walls are composed of the same pine boards and redwood battens that are used on the exterior, with the brick chimney core and piers of unadorned brick. The ceiling treatment is wood with battens making long geometric patterns. A narrow hallway leads into a bedroom wing with three sleeping rooms. The rooms are also constructed of board-and-batten walls. The transition from the corridor to the light-filled rooms with floor-to-ceiling glass doors that open onto the garden is striking, and belies each room's small size.

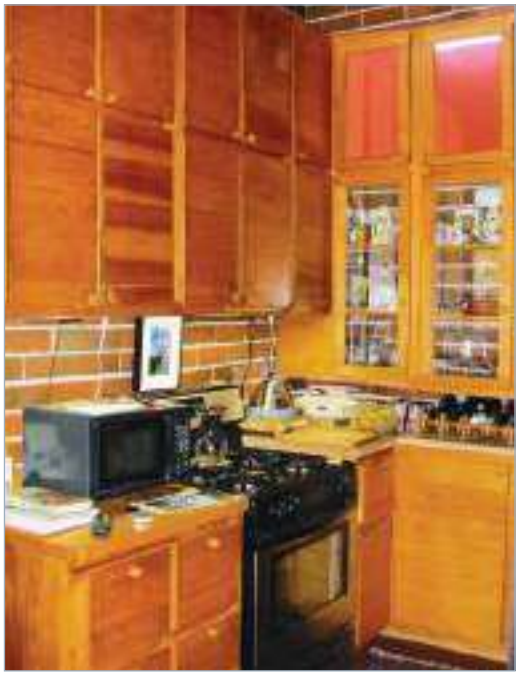
It was in the Jacobs House that Wright first used his "sandwich-wall" construction. The walls consist of three layers: two of pine boards with a plywood core sandwiched between them. The surface pine boards on either side of the core are screw-fastened to the core through the redwood battens, which are shaped to hold the boards, while also allowing them to expand. The plywood core is covered on both sides with tar-paper insulation to serve as a vapor barrier. The interior and exterior surfaces are identical horizontal boards and battens, making interior plastering or decoration unnecessary. The walls could be preassembled at the site and raised into place as they were for this house, or made to size at the mill and delivered to the site. All the interior fittings and furniture of the house were designed by the architect to be able to be built by the client, either at the time of construction or later.

The Usonian house type was planned for maximum privacy from the street. By siting the house close to the edge of the lot the driveway could be shorter and more space allocated to the garden. The traditional kitchen, as a separate room, was eliminated and instead became a space open to the adjacent dining area, with its large window facing the garden, relating interior and exterior space.

(Left) Herbert and Katherine Jacobs House, view facing northwest.
Photograph by David Heald, courtesy of James Dennis.

(Bottom left) Herbert and Katherine Jacobs House, west elevation (street side) showing carport and hidden entrance at end of pigmented red concrete path adjacent to carport.
Photograph by Bill Martinelli, courtesy of the photographer.

(Below) Herbert and Katherine Jacobs House, west elevation and view of carport.
Photograph by David Heald, courtesy of James Dennis.



Herbert and Katherine Jacobs House view to the northwest of living room corner door and "Cherokee" red pigmented concrete slab on interior floor and exterior terrace.
Photograph by David Heald, courtesy of James Dennis.

Herbert and Katherine Jacobs house, view of living room, looking southeast.
Photograph by David Heald, courtesy of James Dennis.

(Above left) Herbert and Katherine Jacobs House, view of kitchen.
Photograph by Bill Martinelli, courtesy of the photographer.

(Left) Herbert and Katherine Jacobs House, view to the east of the dining alcove.
Photograph by David Heald, courtesy of James Dennis.

Herbert and Katherine Jacobs House, view facing north showing narrow entrance hall (left), living room board-and-batten ceiling treatment, and dining alcove (right).
Photograph by David Heald, courtesy of James Dennis.

Herbert and Katherine Jacobs House, sample of "sandwich wall" construction.
Photograph by Scott Perkins, courtesy of the photographer.

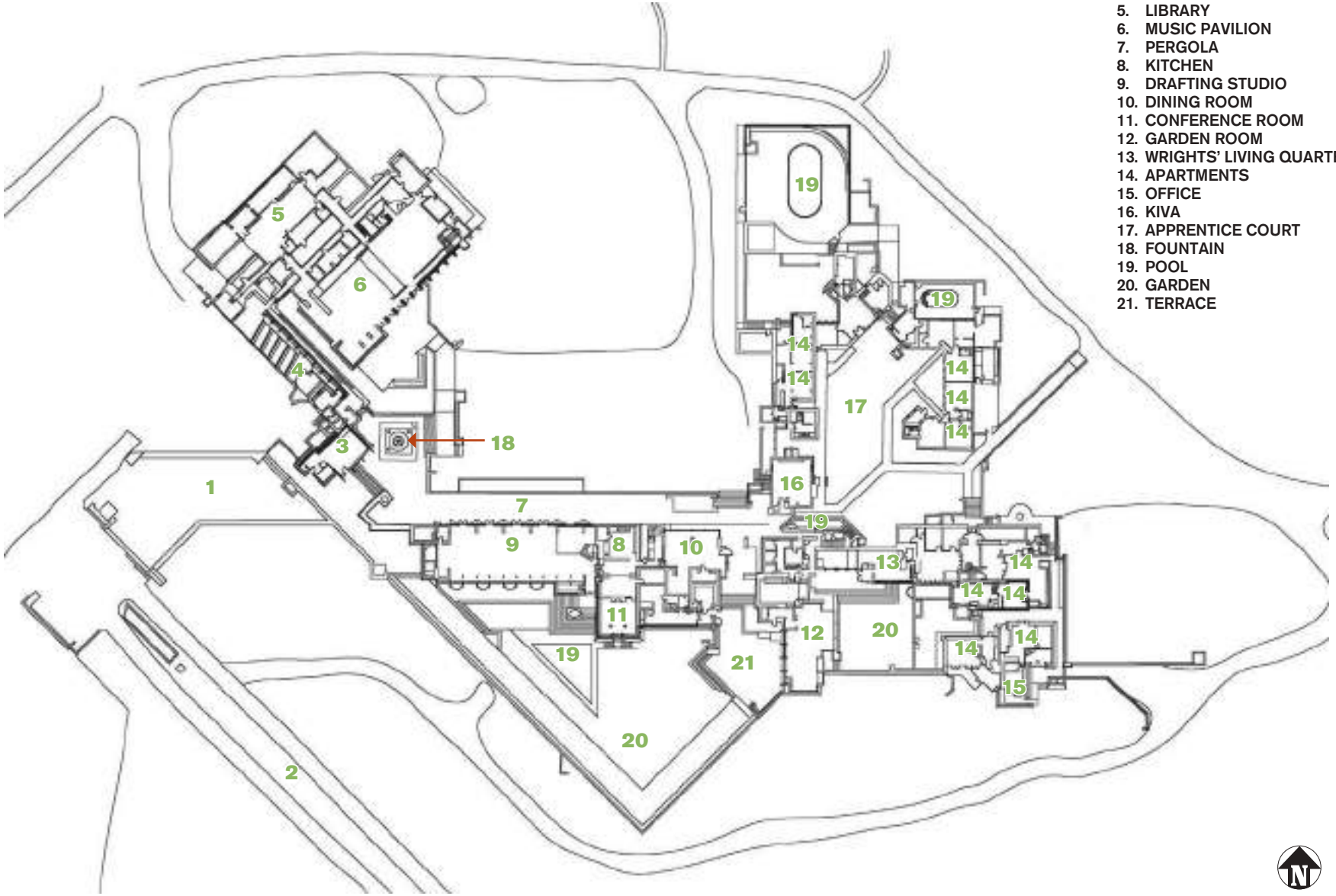
Herbert and Katherine Jacobs House, view looking north in master bedroom.
Photograph by Bill Martinelli, courtesy of the photographer.

2.a: TALIESIN WEST SCOTTSDALE, ARIZONA

Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

TALIESIN WEST
Site Plan at Ground Level

1. ENTRANCE COURT
2. ENTRANCE DRIVE
3. WRIGHT'S OFFICE
4. CABARET THEATER
5. LIBRARY
6. MUSIC PAVILION
7. PERGOLA
8. KITCHEN
9. DRAFTING STUDIO
10. DINING ROOM
11. CONFERENCE ROOM
12. GARDEN ROOM
13. WRIGHTS' LIVING QUARTERS
14. APARTMENTS
15. OFFICE
16. KIVA
17. APPRENTICE COURT
18. FOUNTAIN
19. POOL
20. GARDEN
21. TERRACE



Purna Nanawala, delineator.

CONSTRUCTION OF TALIESIN WEST began in 1938. Dramatic and angular in its desert setting and innovative in its use of materials, Taliesin West became Wright's winter home and studio during the final two decades of his career. Beginning as an almost primitive desert camp, Taliesin West is today a group of permanent structures with translucent roofs that mesh buildings and landscape in new ways. It defined a new, radically modern form of regionalism for the desert environment of Arizona and the Southwest.

The city of Scottsdale adjoins the city of Phoenix in central Arizona, now one of the fastest growing regions in the United States. While residential development now borders three sides of the buffer zone, the property still maintains much of the rugged and wild desert character that first attracted Wright to it in 1937. The proposed boundary of 4.285ha is the area encompassing the complex designed by Wright, as well as later additions by his associates, that is regulated as a historic area under the City of Scottsdale's zoning law (see map on page 47 and discussion on pages 289-291.)

The rest of the land owned by the Frank Lloyd Wright Foundation, which is also the National Historic Landmark boundary, was used as the buffer zone because it retains the original characteristics of the site as experienced by Wright—a desert mountain setting vital to the resource. The historic buildings occupy an area of approximately 4.046ha in the relative center of a 198.087ha buffer zone. This large buffer zone comprises open native desert landscape, and also includes more recent structures built as part of the operation of Taliesin West as an archive and school since Wright's death in 1959 (viz., the archives buildings, Crescent Apartments, apprentice shelters, and other support structures). Along one side of the buffer zone is a protected mountain preserve that incorporates an important element of the historic view shed. The buffer zone therefore allows for protected viewsheds out from the historic buildings of the immediate surrounding natural open space (the buffer zone) and then links the eye to major geographical landmarks in the distance along two major viewsheds—Thompson Peak to the northeast, and the expansive desert valley to the southwest. Moving through the historic buildings, the general experience is that of the natural open space of the buffer zone, with limited distant views of residential development beyond.

Low retaining walls, walkways, and broad terraces link the principal structures within the proposed nominated area to the terrain and to each other. The complex is unified by a 1.48m^2 unit system, rotating 45 degrees on itself. Walls and roofs are set at 15-degree slopes. Indoor and outdoor spaces flow into each other, and the spatial movement through the complex is an important part of the architectural experience. The main facilities are: Wright's former office, drafting studio, kitchen, dining room, garden room, the Wrights' former living quarters, an apprentice court, and the so-called Kiva and Cabaret theaters.

One enters the property along a winding road that follows a desert wash. A stone-and-concrete monolith and ancient petroglyph boulder mark the entrance to the complex. John Sergeant recollected a feeling he had processing through the Taliesin West property to one he had "encountered twice as a student: on the Acropolis in Athens and the mountainside at Delphi." The ascension through its vertical elements, he claims, was also much like Le Corbusier's 1920s villas where "The inference is clear: you ascend from the everyday to the meditative world of the mind."

The principal buildings are constructed of a desert masonry that used native volcanic rock in combination with a concrete made from local desert sand and cement that gives the appearance of a rubble surface. The desert masonry provides the defining character of the buildings, tying them literally and symbolically to the desert environment. The long history of the region is evoked by strategic placement of boulders with ancient petroglyphs throughout the property. A petroglyph known as the "whirling arrow" (a squared spiral) appears on one of these stones that Wright found and placed in the entry court in the 1950s; he had seen similar petroglyphs on a wall at the nearby ruins of the Great House at Casa Grande, a construction of the ancient Sonoran Desert people. The Whirling Arrow symbol recurs in many forms at Taliesin West. It can be perceived on a large scale in the rotating plan of the complex (see page 173). As a decorative and symbolic motif, it appears in several places, first incorporated into entry pillars which were later removed by Wright, but it remains on the main entry gate, and appears in the windows of some of the buildings, in an abstracted form, as noted below.

The first principal building encountered is Wright's former office. Its sloping desert masonry walls are topped with a roof (originally canvas, and changed in 1962 to Fiberglas) supported by beams of wood and steel. The adjacent concrete terrace is scored with joints establishing the 1.48m², module from which the overall design of the property is organized.

Next encountered is an interconnected group of buildings at the core of the complex: the drafting studio, dining area, guest rooms, and a terrace overlooking the valley. The drafting studio looks out onto a terrace with a garden and pool extending out at a 45-degree angle. A dining room now looks north and east to the McDowell Mountains with peaks of 1,300m.

A breezeway connects to another terrace by a short flight of stairs via which one enters the garden room (or living room) and the Wright family's living quarters. The garden room provides views to an enclosed garden on the east and the horizon to the south; its windows, and those of the dining alcove, incorporate the whirling arrow design (see pages 108).

The apprentice court consists of small private apartments adjacent to a swimming pool. Northeast of the apprentice court is the Sun Cottage, the first living quarters of the Wrights, rebuilt and expanded several times into the 1970s. At one corner of the apprentice court is a separate building called the Kiva. A kiva is a room, often subterranean, frequently found among ruins in the American southwest, indicating ritual or cultural use by the ancient peoples of the region. At Taliesin West, this space, also built of desert masonry, was used for gatherings of various kinds.

From the Kiva, one can follow the main axis of the complex and pass under the pergola adjacent to the drafting studio, or move across the Garden Court to the Music Pavilion and Cabaret Theater.

The views of the surrounding desert and mountains are important to the experience of Taliesin West. In the late 1950s, Wright focused attention on the areas surrounding the buildings and terraces by rerouting the entrance drive to give maximum visual impact of the buildings to visitors and placing automobile parking behind a screen wall. Similarly, the Music Pavilion's profile was kept deliberately low to avoid blocking the view of the mountains from the entrance drive.

Pathways, plazas, and open spaces are integrated with the multiple structures to define a series of axes related to the topographical features of the site. The extensive use of indigenous plants, water features, and other landscape elements creates an architecture that is as much a work of site-specific landscape architecture as it is a building. All the spaces in the complex are articulated for views toward the landscape and its dramatic features.

Taliesin West still contains living and working spaces for members of the Taliesin Fellowship as well as office, entertainment, and instruction spaces for the School of Architecture at Taliesin and the Frank Lloyd Wright Foundation.

Taliesin West, view to the northwest from pergola of drafting studio showing entrance court (left) and Frank Lloyd Wright's former office (center).
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin West, drafting studio.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin West, view to the south showing entrance door leading to dining room (left) with guest deck apartments (above), and desert masonry structure of kitchen (right).
Photograph by Andrew Pielage, courtesy of the photographer.

(Above) Taliesin West, detail of bell tower showing "whirling arrow" motif derived from petroglyph of desert stone.
Photograph by Andrew Pielage, courtesy of the photographer.

Taliesin West, view to the southeast showing drafting studio (left) the Wrights' former quarters (center), and gravel path leading to prow at desert's edge (right).
Photograph by Andrew Pielage, courtesy of the photographer.

Taliesin West, view to the northwest showing garden, with garden room (left) and entrance doors to the Wrights' personal living quarters (center).
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin West, view to the northeast of garden room interior showing "whirling arrow" motif formed by window mullions (left), canvas ceiling treatment, and view through windows to McDowell mountains beyond.
Photograph by Andrew Pielage, courtesy of the photographer.

Taliesin West, desert masonry walls with petroglyph rock (left).
Photograph courtesy of the Frank Lloyd Wright Foundation.

Taliesin West, Kiva theater.
Photograph by Andrew Pielage, courtesy of the Frank Lloyd Wright Foundation.

Taliesin West, view to the southeast of Cabaret Theater interior showing desert masonry wall and ceiling construction.
Photograph by Andrew Pielage, courtesy of the photographer.

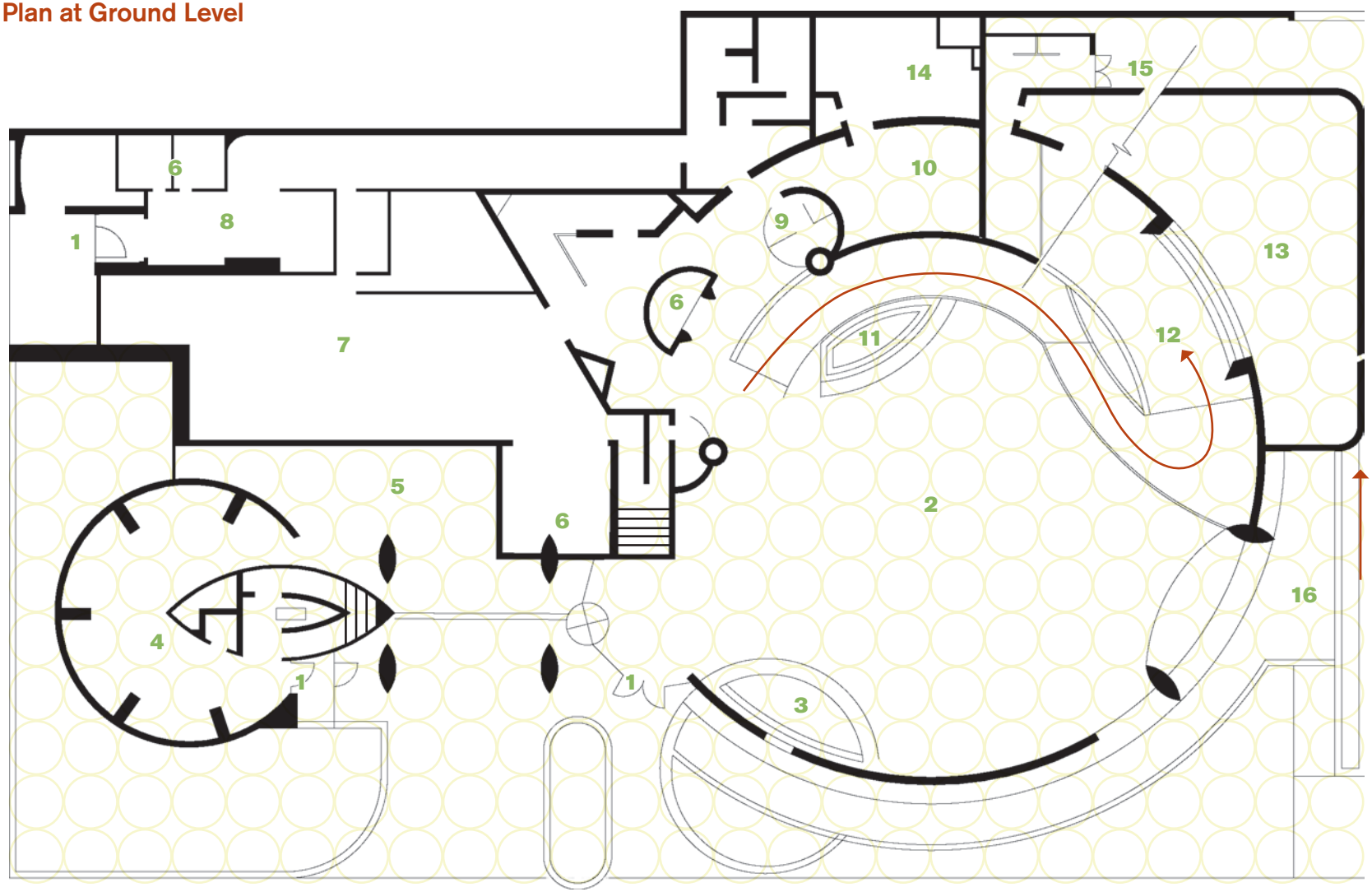
Taliesin West, interior, Kiva theater.
Photograph courtesy of the Frank Lloyd Wright Foundation.

Taliesin West, view to the northwest from entrance to Kiva theater showing dining room with guest apartments above (left), kitchen with bell tower (center), and drafting studio with attached pergola (right).
Photograph by Andrew Pielage, courtesy of the photographer.

2.a: SOLOMON R. GUGGENHEIM MUSEUM NEW YORK, NEW YORK

Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation, NY.

SOLOMON R. GUGGENHEIM MUSEUM
Plan at Ground Level



1. ENTRY
2. MAIN GALLERY
3. ADMISSIONS DESK
4. MONITOR (NOW STORE)
5. MUSEUM STORE
6. ELEVATOR
7. WORK AREA
8. STAFF LOBBY
9. LAVATORY
10. COATROOM
11. FOUNTAIN
12. RAMP UP
13. GALLERY
14. STORAGE
15. SERVICE ENTRANCE
16. ENTRANCE TO RESTAURANT (BELOW)

Purna Nanawala, delineator.

LOCATED IN THE MANHATTAN BOROUGH of New York City, the Solomon R. Guggenheim Museum, built between 1956 and 1959, creates a dynamic spatial drama through the use of the spiral form. Located on the east side of Fifth Avenue between East Eighty-Eighth and East Eighty-Ninth Streets facing Central Park, its modern aesthetic and sculptural qualities boldly distinguish the building from its more traditionally styled and rectilinear neighbors.

Part of the New York City rectangular street grid, the neighborhood saw most of its development in the twentieth century. Within this affluent neighborhood buildings range in height and style from four-story Beaux-Arts townhouses to ten-story modern apartment blocks. The area proposed for inscription is the lot line of the museum, which includes approximately one quarter of the city block. Within this area are the original museum and a narrow ten-story annex completed in 1992 and set behind the museum facing East Eighty-Ninth Street on the footprint of an earlier Taliesin Associated Architects-designed four-story annex.

The broad expanse of Central Park, across Fifth Avenue presents a striking contrast to the density of the built environment. The buffer zone consists of portions of the surrounding city blocks that are subject to the legal restrictions of the City's Carnegie Hill Historic District. This historic district, which extends beyond the buffer zone, as well as the Metropolitan Museum Historic District, the Park Avenue Historic District, and Central Park, a protected New York City Scenic Landmark, further protect the setting beyond the buffer zone (see pages 296-297).

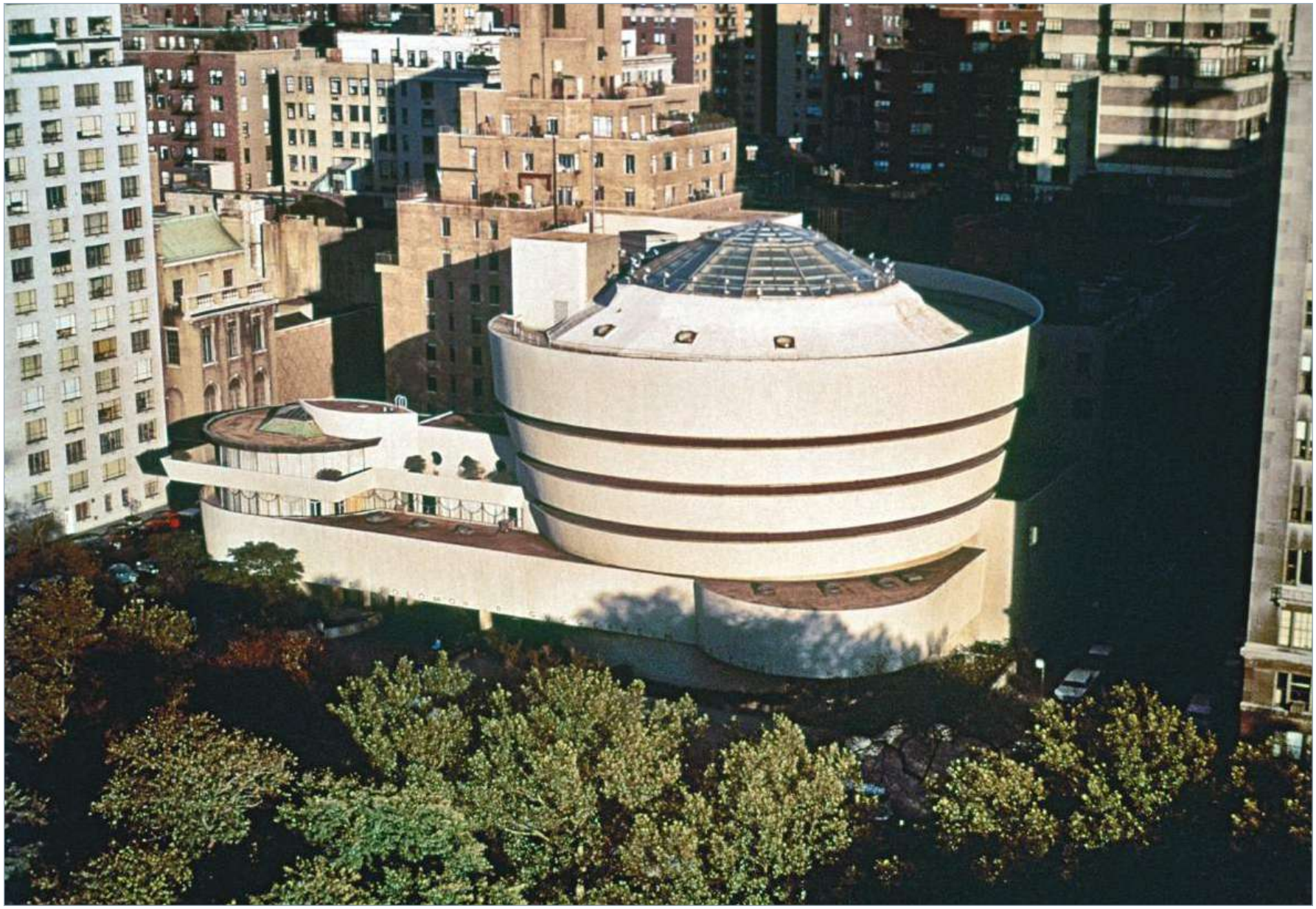
The Guggenheim is constructed of concrete reinforced with steel rods. The building consists of three major components: the main spiral-shaped "rotunda" at the south end of the lot; the smaller, circular administrative office wing at the north end (known as the monitor), and the horizontal cantilevered bridge that connects the two, wrapping around the south, west, and north sides of the building at the second-story level.

The entire design is based on geometric modules of circles, triangles, and lozenges. These motifs carry the design from the ground level to the dome and are visible on such elements as exterior sidewalks, terrazzo floors, fountains, planters, and stairways. The composition is developed through a series of interlocking forms. The large rotunda gallery forms a spiral that is anchored by a triangular shaft enclosing the staircase and elevator. Similarly the circular monitor is engaged with a lozenge-shaped staircase.

The rotunda coils five times around to a sky lit, shallow dome 29m above the floor. Wright conceived of the spiral as a pure cantilever with the ramp integral with the exterior wall and the interior balcony wall. But in response to concerns of city building officials, twelve reinforced concrete partitions, or "web walls," were added to the spiral. They also create bays for the display of art. The twelve-sided dome above the rotunda is formed of ribs that are extensions of the structural partitions.

The administrative wing is also based on a circular module. The basement level of the building contains office and classroom space as well as a theater/lecture room. The theater is circular in plan, with seating arranged in curved rows that are directed towards the semi-circular stage.

The Guggenheim's reinforced-concrete structure is a seamless and organic integration of program, form, structure and materials. The unprecedented integration of circulation and gallery space was intentionally crafted to encourage visiting the museum as a social as well as an artistic experience. At the same time, visitors can view the individual works of modern and contemporary art in a way that isolates them from one another as well as joining them in unexpected combinations looking across the open space to the galleries on the other side. By virtue of its dynamic form and spectacular interior space, the building became a destination itself, establishing a paradigm for modern museums around the world.



Solomon R. Guggenheim Museum, aerial view from Central Park.
Photograph courtesy of the Solomon R. Guggenheim Foundation, NY.

Solomon R. Guggenheim Museum, view looking down upon fountain and seating area from upper level, exhibition Jenny Holzer, 1989-90.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation, NY.

(Top left) Solomon R. Guggenheim Museum, triangular staircase of the main gallery.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation, NY.

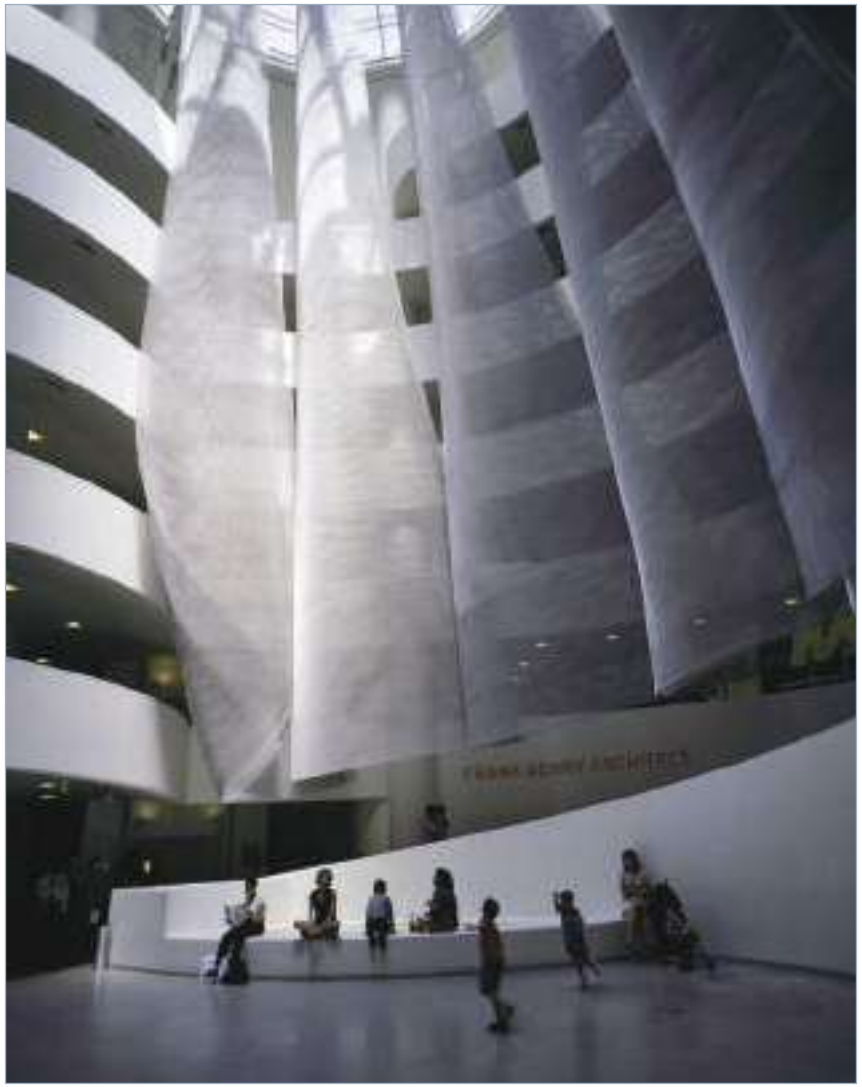
(Left) Solomon R. Guggenheim Museum, view of upper level showing skylight and reinforced concrete partition walls.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation, NY.

(Above) Solomon R. Guggenheim Museum, view of rotunda and skylight from ground floor.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation, NY.

(Above) Solomon R. Guggenheim Museum, view of the rotunda with fountain in foreground.
Photograph courtesy of the Solomon R. Guggenheim Foundation, NY.

(Top right) Solomon R. Guggenheim Museum, Thannhauser Gallery, located in the former monitor building.
Photograph courtesy of the Solomon R. Guggenheim Foundation, NY.

(Right) Solomon R. Guggenheim Museum, view of the Peter B. Lewis Theater, lower level.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation.



Solomon R. Guggenheim Museum, main gallery, exhibition Frank Gehry: Architect, May 18- September 4, 2001.
Photograph by Ellen Labenski, courtesy of the Solomon R. Guggenheim Foundation, NY.

Solomon R. Guggenheim Museum, main gallery, exhibition Cai Guo Qiang: I Want to Believe, February 22-May 28, 2008.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation, NY.

2.b: HISTORY AND DEVELOPMENT

The Work of Frank Lloyd Wright in an Historical Context

"MODERN ARCHITECTURE," as defined for this nomination, emerged in the last few years of the nineteenth century and early years of the twentieth century, driven by forces growing out of the Industrial Revolution. As society changed, life became more mobile and dynamic; architecture similarly changed and progressed as the availability of new materials, construction methods, and varied building technologies not only expanded architectural possibilities but fundamentally changed its character. For example, the strength provided by the technological possibilities of steel and concrete presented new structural opportunities, freeing the building plan from the need for load-bearing exterior walls and many interior supporting walls, allowing for greater freedom of movement, increased flexibility of function, and the creation of new and inventive forms.

The nearly sixty-year period covered by the components of this nomination is one characterized by dramatic technological and social change. In both in the United States and abroad, effects of industrialization had a significant impact on people and redefined the nature of work—and thus their living and working environments. Wage earners were perhaps most affected while those in rural areas less so, but change permeated all levels of society as fundamental aspects of daily life changed.

As confidence in the vitality and significance of modern life increased, the goal of reflecting contemporary values in architecture began to emerge. This goal was not new, as mid-nineteenth century theorists César Denis Daly (1811-1894), Eugène Viollet-le-Duc (1814-1879), and Gottfried Semper (1803-1879) were discussing that possibility in their writings decades earlier. They held that architectural styles of the ancient world had been "authentic" expressions of their time, but they also felt a general distaste for stylistic eclecticism based on purely romantic notions of history that combined a variety of forms and elements to create something aiming at originality. While there was little agreement regarding what form this "modern" architecture would take, there was a consensus that it should reflect new methods of construction, controlled by the requirements of function, and honest expression of materials used. This search for "a modern architecture for a modern society" would engage the imaginations and enthusiasm of many architects.

Pioneering architects of the early-modern era included the leading practitioners of the Art Nouveau movement and its various manifestations in France through the work of Hector Guimard (1867-1942); in Belgium through Victor Horta (1861-1947); in Spain through Antonio Gaudí (1852-1926); in Austria through Otto Wagner (1841-1918) and Joseph Maria Olbrich (1867-1908); and those involved the Arts and Crafts Movement in Great Britain, especially designers William Morris (1834-1896) and Charles Rennie Mackintosh (1868-1928). In the United States, architects Frank Furness (1856–1924), Henry Hobson Richardson (1838-1886), and the Chicago School architects Louis Sullivan (1856–1924), John Wellborn Root (1850-1891), and Frank Lloyd Wright were early innovators in defining a truly new American architectural grammar in the modern era.

While Art Nouveau provided the first decisive break with the prevailing stylistic eclecticism, by 1905 even this "new" style was in decline. Architects reacted against its subjective nature and began searching for a more rationalist approach, one more in step with an industrialized society. The Arts and Crafts Movement, with its more sober character, its values of honesty in materials and construction, and its embrace of simplicity of form, became a major influence on the architects, designers, and craftspeople of the Vienna Secession and the Deutscher Werkbund. Viennese architects Josef Hoffmann (1870-1956) and Adolf Loos (1870-1933) advocated for a simplification of form. Hoffmann, in his stunningly sophisticated Palais Stoclet (Brussels, 1911; inscribed as a World Heritage Site in 2009 under criteria i and ii), combined formality and informality with a brilliant composition of cubic forms adorned with linear moldings to emphasize their planarity. Loos' simplification was even more extreme. His seminal manifesto "Ornament and Crime" (1908) detailed abhorrence for the cultivated aestheticism of the Secessionists and what he saw as the decadence of ornament. Admiring the inherent beauty of everyday objects and the rural vernacular buildings of peasants, Loos saw plainness as the way to achieve a truly modern style. His Steiner House (Vienna, 1910) is a study in simplification with strategically located large plate-glass windows and undecorated planar wall surfaces.

In the early years of the twentieth century, Parisian architect Auguste Perret (1874-1954) explored the potential of reinforced concrete. The material had been used as a work-horse material in the late nineteenth century for industrial build-

ings, typically as a modern substitute for traditional timber and iron construction, but Perret explored the material's aesthetic and spatial possibilities. His Rue Franklin apartment building (Paris, 1904) featured concrete-frame construction to create open interior spaces and maximize views from large windows, all with a classically grounded tectonic clarity. In 1904, Lyonnaise architect Tony Garnier (1869-1948) presented his revolutionary plan for Une Cité Industrielle, and though never realized, the plan called for defined zones dedicated to the construction of factories, administrative buildings, and housing, and the inclusion of open spaces. In particular, his railway building, designed with a tall glass and concrete tower and daring cantilevered canopy supported by only two thin piers, anticipated the potential of reinforced concrete to create expansive public spaces and innovative forms, including Wright's Guggenheim Museum.

In Scotland, Charles Rennie Mackintosh's highly original forms, while usually associated with Art Nouveau, stressed a more sober expression of simplified masses and sequences of dynamic spaces. His Glasgow School of Art (1909) took advantage of a steep site by juxtaposing volumes of differing sizes to provide a range of light qualities within the school's studio spaces. An admirer of Japanese design, as was Frank Lloyd Wright, Mackintosh also strove to simplify the interiors of his projects, especially for the Willow Tea Rooms (Glasgow, 1904) and the Hill House (Helensburgh, 1904) where furnishings, colors, and art glass unified his architecture through a common philosophy.

Architecture based on mechanization ideals was a way that modernism was embraced by architects in Germany and Italy in the decade preceding the First World War. During this period, theorists of the Deutscher Werkbund and Italian Futurists viewed the role of machines in nearly heroic proportions, and thus it was only fitting that architecture and design should reflect its importance. However, with still no consensus on how to achieve this, multiple strands of thinking emanating from the English Arts and Crafts movement were put forward. One strand believed that quality products could only be realized through a focus on craftsmanship; another maintained that an individualistic artistic temperament was essential to the creation of new forms; and a third was more functionalist, believing that the best forms would come out of a logical and direct use of new materials applied to the problems of building. A fourth view, bridging all three positions, advocated that industrial handcrafts be revived as a collaborative enterprise of designers and craftspeople to include mechanized production and that forms be determined only by their function with any ornamentation eliminated.

German architect Peter Behrens (1868-1940) viewed industrial buildings as cultural symbols of his age and turned to classical principles in his concern for proportion, giving a new dignity to buildings such as his massive AEG Turbine Factory (Berlin, 1909). Behrens would go on to emphasize the importance of all aspects of industrial design in his office, which became a training ground for several of the innovators of the modern movement, including Le Corbusier (1887-1965), Ludwig Mies van der Rohe (1886-1969), and Walter Gropius (1883-1969). Indeed, it would be Gropius, along with Adolf Meyer (1889-1921), in the design of their Fagus Factory (Alfeld on the Leine, 1911-12; inscribed on the World Heritage List 2011, criteria ii and iv), that would play a significant role in creating a "factory aesthetic" that a decade later would influence what is known as the universal "machine style."

In Italy, the ideas of Antonio Sant'Elia (1888-1916) expressed "new spiritual attitudes" in his Futurist Manifesto written as an introduction to an exhibition of drawings for Città Nuova (1914; unrealized)." The manifesto argued that all stylistic traditions were exhausted and should be abandoned in favor of totally new forms appropriate to the new materials and means of construction. While the futuristic, dynamic and anarchical values were a clear contrast to the more rational thought of the Deutscher Werkbund, one thing was certain—it was the age of the machine and one with which an authentic modern architecture would inevitably be linked.

In the United States, Louis Sullivan, who earlier decreed that "form ever follows function," believed that function and structure alone do not generate an aesthetically pleasing form, and so turned to highly abstracted ornament based on natural forms and historical precedents to express the underlying classically inspired order of his structures. This is evident in his deceptively small, but monumental looking, National Farmers Bank (Owantonna, Minnesota, 1908). Sullivan applied his precepts creatively to the new vertical form of the early skyscrapers, along with others working primarily in Chicago, and the new form was profoundly influential for modern urban centers. But it would be Sullivan's protégé, Frank Lloyd Wright, more than any other American, who synthesized the preoccupations of the period to influence architecture as a whole far beyond his homeland.

The Chicago School was a significant American expression of modernism in the late nineteenth and early twentieth centuries. It married a practical embrace of up-to-date internal structural technologies with the clear aesthetic expression of structure on building exteriors. Ornament could range from traditional to progressive, from Classical to personal expressions of ornament based on nature or geometry. Sullivan was a significant architect working within this movement, with buildings such as the Schlesinger and Mayer Department Store (later, Carson, Pirie, Scott and Co.; Chicago, Illinois, 1899, 1903) exemplifying his architectural ideals.

Frank Lloyd Wright was a draftsman in Sullivan's office between 1888 and 1893, and he absorbed Sullivan's beliefs in modern architecture and progressive form and ornament, while transforming them in his own personal manner. Wright is the progenitor of the Prairie School, emerging from the Chicago School, and yet distinct based on Wright's explorations of basic geometric forms, simplified ornament abstracted from nature and geometry, and flowing internal spaces with few traditional spatial divisions. Within the historic context of American architecture of the late nineteenth and early twentieth centuries, Wright's Prairie School designs are arguably the most radical expression of modernist ideals in the United States before World War I. Wright's Prairie School buildings express, through their innovation, the dynamic American society of the early twentieth century within which they were created.

By the turn of the twentieth century, the United States began to overtake Great Britain as the world's leading economic and industrial power. The wealth of its rapidly growing cultures of a financial "elite" (industrialists and financiers) and a "bourgeoisie" (shopkeepers, managers, self-employed artisans, professionals) supported the construction of large urban homes, exclusive suburban villas, and grand public buildings in a variety of European-inspired styles. As Jean-Louis Cohen has pointed out, "If classicism had a promised land, it was the United States," and from the turn of the century through the first third of the twentieth century, the Beaux-Arts model was entrenched. Nevertheless, some architects, including Louis Sullivan and Frank Lloyd Wright, who had absorbed many of the ideals of the Arts and Crafts movements in the United States and Britain, grasped the potential of new materials and technology to create an authentic architecture they felt was appropriate to American life.

In 1887 Frank Lloyd Wright, not quite 20 years old, arrived in Chicago during a building boom following the 1871 fire that destroyed much of the city. Chartered in 1837, Chicago's population in 1840 was only 4,000; however, by 1900, it had mushroomed to 1.7 million with an influx of European immigrants and native-born citizens relocating from the rural Midwest and eastern states. Working first for Joseph Lyman Silsbee, who followed the fashion of the day working in a variety of European styles, Wright left to join the more progressive firm of Adler and Sullivan. Mentored by Sullivan, Wright had absorbed many of the progressive architectural and social beliefs of the Arts and Crafts movements. Notable among these were the belief that many of the ills of industrialization could be addressed through good design, including honest and visually-expressive construction, the integration of buildings with the landscape, and the moral and aesthetic value of simplification. More socially conservative than their British counterparts, Americans shunned socialism in favor of what they saw as American democratic ideals such as the primacy of the individual and the Jeffersonian ideal of an agrarian republicanism. Ultimately, progressive American architects and their clients wanted an authentic American architecture unsullied by visually-eclectic European influences, instead embracing an architecture formally and functionally connected to the inherent beauty of natural "organic" principles. Such a new architecture was meant to embrace and exemplify American democracy at its best, and as such, Chicago and Prairie School architects, including Wright, influenced popular aspects of American architecture and visual culture. For example, Wright's later Usonian homes, exemplified by the first Jacobs House, would be an influence on post-World War II American residential architecture.

The implications of industrialization in American cities soon became clear. Continuing a pattern established in the nineteenth century with the Industrial Revolution, wealth came within reach of not only the industrial barons and society's elite, but also small factory owners, merchants, and other professionals. Paired with technological advances in transportation such as commuter trains and streetcar networks, the American upper and middle classes increasingly found escape to newly-developing suburbs away from the noise, pollution and political and social excesses of city life. Money was made in cities, but life was increasingly lived in suburbs by those with financial means.

For architects, work was not only plentiful, but it also provided the opportunity to create grand office buildings in cities and expansive houses befitting the suburban lifestyle. However, tenements and drab factories were negative counterbalances. Working-class structures were typically hastily built and shabbily constructed, overcrowded and without proper sanitation, and urban life for those with modest means could be difficult. Life in the factory was also challenging as laborers saw their sense of autonomy disappear as they now worked under the supervision of others, often for long hours. Speed in production became the singular goal and machines set the pace. The resulting contrast between the wealthy and the poor could not have been greater.

Until recently, critics and scholars viewed Frank Lloyd Wright's engagement with the city as one of disdain for urban settings. Neil Levine's *The Urbanism of Frank Lloyd Wright* (2015) has convincingly demonstrated otherwise. Levine argues that Wright, along with many of his progressive contemporaries, sustained a career-long desire to solve many of the problems of the industrialized city—including a concern for affordable housing and urban renewal. Unlike many proponents of the Arts and Crafts who decried the machine in favor of traditional handcraft, Wright championed the machine in his first manifesto, "The Art and Craft of the Machine," delivered at Jane Addams's Hull House in Chicago, an early settlement house serving immigrants and others. In it, he argues that such thinking harkens back to an era that has vanished, and that the machine in the hands of a skilled

worker was the best way to make houses more affordable, simplifying their form through machine construction.

At age 28, Wright collaborated with developer Edward Waller to construct some of the first subsidized housing in Chicago—two two-story apartment blocks in a working-class neighborhood west of downtown Chicago. The first, Francisco Terrace Apartments (1895), was organized around a central communal garden court. Waller's son commissioned the Lexington Terrace project (1901, revised in 1910; unrealized); of note was the set-back second level balcony overlooking and encircling the central court in the same manner typical of European social housing in the 1920s.

The issue of what was an appropriate architecture for modern family life, whether wealthy, middle-class, or working-class, was one that engaged the imaginations of many architects of the twentieth century, including Wright. Throughout his career, Wright saw the family as critical to the success of democracy, and while he explored multi-family housing early in his career, the single-family home was his standard, and it frankly was the ideal of most Americans. Though best known for his suburban houses for the wealthy, he continually explored ways to provide beautiful, yet affordable, homes to a broad public through efforts including his American System-Built Homes (1912-16). It is noteworthy that Wright's office produced over 960 drawings for this project, vastly more than any other in the Wright archives.

Wright was not just interested in individual house design; he also was interested in city and suburban planning. In this, Wright was part of a larger interest in planning among architects in both Europe and America. Wright's early interest in city planning is illustrated in his development plan for the Roberts Block (1896) in the Chicago suburb of Ridgeland. Working within the context of the American city grid, he proposed replacing the typical service alley located at the rear of every lot with a communal garden. Later the idea of non-hierarchical communal green space was expanded when he submitted his "Home in a Prairie Town" to the *Ladies Home Journal* for their new series entitled, "Model Suburban Houses which Can Be Built at Moderate Cost." The submission showed the Quadruple Block Plan (1901) along with two typical house plans. The Quadruple Block Plan called for a total restructuring of the city's system of land subdivision to provide a new basis for the relationship between community and privacy. Rather than the typical rectangular city block, Wright proposed a square block with houses placed on each corner and the center of the block reserved for a communal garden. While never fully realized, the Quadruple Block Plan would provide the framework for his revolutionary Prairie house designs and later inform his thinking regarding the Usonian house. Some connect Wright's interest in communal green space with the Garden City Movement, initiated in Great Britain by Ebenezer Howard in 1898, which was widely influential.

Following a series of transitional experiments in the 1890s, Wright finally synthesized his thinking in what is known as the Prairie School or Prairie Style, first with the Ward Willits House (Chicago, 1902) with its cross-axial plan reaching out into the landscape, and culminating with the Frederick C. Robie House, with its dynamic cantilever, horizontal form, open plan, and technical innovations. In the Prairie house, Wright fused the rationalism of Classicism and the picturesqueness of the Gothic with elements of the Arts and Crafts. These houses successfully integrated modern technology into buildings from which, like a living organism, no part can be removed without destroying the whole. Here all of the parts work together: the plan and cross-section, lighting, heating and ventilation, the low hipped roofs, deep eaves, bands of glazed doors and windows, art glass and furniture, terraces, and setting. No single element has one function; together they created a complete work of art, an organic whole.

The Prairie houses also became known for their ability to convey an almost primal sense of comforting shelter. Likely derived from Gotfried Semper's writings, Wright explains his "grammar" for the Prairie house as first requiring the placement of the house on a "projecting base course" that makes the house "look as though it began there at the ground." The exterior walls then seem to rise organically out of the earth as an uninterrupted "screen" until just below the roof they open to a "continuous window series below" the "low spreading roof, flat, or hipped or low gabled, with generously projecting eaves over the whole" to impart "the essential look of shelter." The last component was the large integral fireplace with a broad chimney, what Wright called a "real fireplace" as opposed to the then-popular manteled fireplace, which he contended was merely a "marble frame for a few coals on a grate." Of the fireplace's significance he wrote, "So the integral fireplace became an important part of the building itself in the houses I was allowed to build out there on the prairie. It comforted me to see the fire burning deep in the solid masonry of the house itself. A feeling that came to stay."

Among Wright's early public buildings, two stand out—the Larkin Administration Building (Buffalo, New York, 1903; demolished 1950) and Unity Temple, (Oak Park, Illinois, 1908). As with Auguste Perret, the potentials of reinforced concrete intrigued Wright; however, unlike Perret, Wright abandoned the concrete frame in his Unity Temple in favor of monolithic reinforced concrete, in conjunction with the structural cantilever, to create a plasticity of space defined by intersecting and overlapping planes. While likely influenced by the budgetary limitations of the small suburban congregation, the move broke the convention for American and European religious architecture.

Together these early works drew the attention of European modernists who admired their shifting planes, abstract masses, and open plans when they were presented in the German publication *Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright* (1911), published by Ernst Wasmuth. The monograph contained illustrated plans and perspectives of the architect's buildings from 1893–1909. It was the first publication of Wright's work to appear in Europe and was followed by an album of photographs which enjoyed an even greater circulation. Along with the illustrated article, "In the Cause of Architecture," published in the March 1908 issue of the *Architectural Record*, a magazine which was widely circulated in America and abroad, these enabled Wright's work to become known in Europe.

One of Wright's early European admirers was Dutch architect Hendrik Petrus Berlage (1856-1934) who, like many of his contemporaries proposed that instead of ornament, the essentials of modern architecture were the interrelationship of masses, planar walls, the direct expression of materials, and the primacy of interior space. Berlage had seen Wright's work firsthand during a visit to the United States in 1911 and saw in his designs a validation of his own desire to enrich function with spirit. While Berlage was the best known of Wright's supporters, other Dutch architects found much to appreciate in the work of the young American. Michel De Klerk (1884-1923), working in the Expressionist style, designed the individualistic Zaanstraat Post Office (Amsterdam, 1917) with horizontal dynamism, a layering of space, and deft use of materials that recalls elements of Wright.

At the same time, those who rejected Expressionism were also drawn to Wright, including Theo van Doesburg (1883-1931), J.J.P. Oud (1890-1963) and Walter Gropius (1883–1969), who, with only images to inspire them, focused primarily on Wright's abstract aspects. They did not know the suburban context or siting of Wright's projects and this engendered a fascination for spatial qualities that resulted from hovering and intersecting planes. This mischaracterization, along with the influence of modern art painters such as Piet Mondrian (1872-1944) often caused Wright's architecture to be considered "Cubist," and by 1917, Wright's influence helped to nurture the "De Stijl" movement of simple geometric forms, rectilinear grids, and intersecting planes. The precepts of De Stijl were widely applied to a variety of art forms, from architecture to furniture and even graphic design. Informed by abstract art and Utopian ideals, the simplified, Wright-influenced forms advanced by architects like Gropius in years before the First World War gained currency in the period of social emancipation after the war.

Following World War I, the United States emerged as the world's largest economic and military power. Pre-war progressive ideas gave way to complacency in the context of rising prosperity. Known as the "Roaring Twenties', in the United States pre-war conventions were thought prudish, and personal liberties expanded in unprecedented ways. While there was a conservative backlash particularly in rural areas, it was the heyday of Hollywood, jazz, and sexual liberation, along with a greatly expanded consumer culture.

In general, Americans in the 1920s embraced conservative political stances and found leftist political movements such as socialism not to their taste. In this post-World War I decade, Americans in general embraced stylistically conservative architecture for homes, embracing historic revival styles. In the meantime, modernism in the form of Art Deco was beginning to take hold in commercial architecture by the end of the 1920s. European-trained modernist architects such as Rudolph Schindler (1887-1953), and Richard Neutra (1892-1970) did gain a reputation for their work in Southern California during the decade, but such European-influenced modernism was not readily found in the United States before the Great Depression of the 1930s. Interestingly, both Schindler and Neutra had previously worked in Wright's office, learning his ideas on modern architecture.

Frank Lloyd Wright continued to embrace progressive modernist ideals of form, ornament and space during the 1920s, ever experimenting with new ways of designing. His Hollyhock House in Los Angeles embraced a monumentality of form while continuing to show his love of abstract ornament based on nature. He also experimented with building techniques with his textile-block houses, built of ornamental concrete blocks, such as the Millard House in Pasadena. But during this period he remained, as did his European-trained counterparts working in America, much less popular and influential than other architects that embraced historic revival styles such as the Colonial and Tudor revivals, and others working in Art Deco. Instead, a plethora of styles, some deeply rooted in historic and academic traditions, others more loosely progressive, continued to inform American architecture. Such architecture, often quite modern in function despite being cloaked in visual tradition, expressed many ideals Americans believed in following the war, including a comforting domesticity, material affluence, and a connection to older revered European traditions.

During this period, modernist ideas in architecture took a number of popular forms in America. Some Classically inclined architects sought to modernize traditional styles. One approach was to employ a traditional style stripped of its ornament. Among the best examples of Stripped Classicism is by Bertram Grosvenor Goodhue (1869-1924), the Nebraska State Capital in Lincoln (1922). While the hierarchical arrangement of form is retained, the traditional use of columns, pediments, and domes is eliminated. All decoration is simplified, windows appear as holes punched in walls, and there is only the barest of moldings at the cornice. Simplified Classicism also gained popular-

ity in the 1920s. Less spare in detail than Stripped Classicism, Simplified Classic buildings embraced more fully the overall forms and general details of Classicism while modernizing them. Buildings in this mode evoked a sense of the nation's newly realized power and strength while connecting American culture and institutions to traditions of the past.

Others sought to capture the energy of the Jazz Age in a more progressive way and turned to Art Deco. First developed in Europe, Art Deco grew out of several sources including the pre-war Viennese Secession, Italian Futurism, and German Expressionism. Theatrical and atmospheric, its expression employed opulent materials and a dazzling array of motifs derived both from geometric and abstracted natural forms such as flowers, chevrons, and sunbursts and from "exotic" cultural references such as ancient Egyptian, Maya, and Asian. It all came together in 1925 at the Exposition Internationale des Arts Décoratifs et Industriels Modernes in Paris, which also gave the style its name. Though now considered in some ways as part of the American response to Art Deco, Hollyhock House predates this style by at least four years.

As the United States embraced the Art Deco style in the late 1920s, it seemed to capture the spirit of the times in its expression of modernity and freedom from conventions without yielding to a more visually-severe European modernism with its socialist overtones. Businesses found it expressed progress and modern efficiency, and its forms and images lent themselves to creative marketing and advertising. Certainly, no building expressed the idea of progress better than the Chrysler Building in New York (1928). The Art Deco style suited wealthy Americans as well, and it became a ubiquitous style in the design of apartment buildings and retail stores wanting to project an image of being in step with the latest fashion. As the style evolved in America, it attracted a broader audience and was used widely, on everything from modest apartment buildings to small-town drugstores and local diners. One strand of Art Deco drew from "exotic," non-European sources such as Egyptian, Aztec, and Chinese cultures. Such themed styles were seen as particularly suited to movie theaters helping provide escape from everyday American life, and buildings in these visually-unusual modes appeared across the country.

As noted earlier, California in the 1920s proved to be fertile ground for Frank Lloyd Wright, Schindler, and Neutra. A number of other progressive architects also found this west-coast state congenial, including Charles Greene (1868–1957) and Henry Greene (1870–1954), who combined the Arts and Crafts with traditional Japanese joinery in works like the Gamble House (Pasadena, 1909). Another figure, Irving Gill (1870-1936), whom Wright had worked with while in Adler and Sullivan's office, had relocated to California and was designing striking early modern houses such as the Dodge House (West Hollywood, 1916; destroyed 1970) in reinforced concrete. California was the new land of opportunity; not only did it have beautiful and varied landscapes and a salubrious climate, it was socially liberal and prospering. For many it represented the "American Dream" come true.

Hollyhock House was Wright's first significant project in Los Angeles. Aline Barnsdall, a free-thinking heiress to an oil fortune, commissioned Wright to design a complex of buildings for an experimental theatre centered around a private home, combining public with private use. Completed in 1921, Hollyhock House marked a new direction in Wright's work as he explored new landscape and cultural forms very different from that of the Midwest. For this, he turned to regional sources such as Maya architecture and the Spanish Colonial patio house, rather than the free-floating ornament of what would later be considered Art Deco.

The small house for Alice Millard known as "La Miniatura" soon followed in 1923 in nearby Pasadena. In it, Wright again explored the potential economic benefits of concrete construction. The challenge was in the nature of concrete as it was not perceived as a beautiful material. Wright stated his goal, "To take that despised outcast of the building industry—the concrete block—out from underfoot or from the gutter—find a hitherto unsuspected soul in it—make it live as a thing of beauty—textured like the trees." The result is a house of extraordinary beauty inside and out that was built of what Wright termed "textile blocks." Three other textile block houses followed "La Miniatura," however, the construction technique was neither as inexpensive or easy as Wright hoped, and it was not used much subsequently.

At about the same time that Wright was designing projects for California, Europe saw a coalescing of various strands of modern architecture, and old traditions gave way to new forms of such extraordinary force that they would come to define architecture well into the future. Within this blossoming period, the varied individual forms of expression sometimes overlapped and occasionally came into conflict. At the Bauhaus in Dessau, Germany, the Swiss architect Hannes Meyer (1889-1954) replaced Gropius as its director and supplanted the former's rationalist and spiritual ideals with a simple equation: "Function *x* Economics." Despite its capitalistic-sounding goal, the result was an unpretentious and expressive architecture of functional volumes. Wright would later react to some of the iconic buildings in this new "International Style" with buildings of his own organic expression, including Fallingwater.

The young Swiss-born architect Charles Edouard Jenneret (1887-1965), later to be known as Le Corbusier, arrived in Paris in 1917. Earlier in his career, he had

been exposed to the ideas of early modernism, having worked briefly in the office of Perret in Paris and then Behrens in Berlin. Once in Paris, he became familiar with the post-Cubist avant-garde artists and formed a group known as the Purists who, in contrast to the adherents of the non-objective De Stijl, drew their inspiration from what they saw as the honesty and morality of everyday objects—a guitar, café table, a wine bottle, or machine. A painter and prolific writer as well as an architect, Le Corbusier promoted the idea that architecture should be as functional and beautiful as modern engineering and rejected the concept of a home as a place imbued with meaning and tradition. Instead, he called it "a machine for living in." He inverted the tradition of the house being bound to its site, by lifting it off the ground on thin piers called pilotis, and painted the exterior neutral white to further separate it from its surroundings. For Le Corbusier and other like-minded architects of the 1920s, modern life and culture could be made into an intellectual abstraction, and their mission was to create an architecture to fit.

In 1925, the Deutscher Werkbund appointed Mies van der Rohe to organize the first major exhibition of the group since 1914. The brief called for the focus to be on housing prototypes for a single housing estate to be constructed on a site overlooking Stuttgart. Included in the proposed roster of participants were architects from Germany, the Netherlands, Belgium and France, including Mies van der Rohe, Gropius, Hans Scharoun (1893-1972), Oud, and Le Corbusier. Their Weissenhofsiedlung estate (1927) was partially inscribed as a World Heritage Site in 2016 as part of the serial nomination, *The Architectural Work of Le Corbusier, An Outstanding Contribution to the Modern Movement*, under criteria i, ii, vi). Although there were various architects involved, overall the works showed a general consistency of visual expression in their white cubic volumes, simplified façades, roof terraces, horizontal banding of windows, free plan interiors, lack of ornamentation, and machine-age details.

Emanating from the ideals of the Weissenhofsiedlung, a new international modern architecture collective, the Congrès Internationaux d'Architecture Moderne (CIAM) was founded by Le Corbusier in 1928 and became hugely influential. CIAM had two primary goals: to formalize the architectural principles of the Modern Movement, and to improve social conditions through architecture and urban planning. At its fourth meeting in 1933, what became known as the Athens Charter set out the primary functions of urban planning including rigid functional zones separated by green belts, rectangular high-rise apartment-blocks for housing, thoughtful accommodation for traffic, and spaces for recreation. Architects from around the world participated; notably absent was Frank Lloyd Wright.

In 1929, the New York Stock Market collapsed. The subsequent financial panic saw banks closed nationwide in the next several years and every stratum of society affected as the fortunes of the wealthy and the savings of the middle and working classes evaporated. America had entered the Great Depression, and its repercussions were felt in economies the world over. The optimism that had characterized the pre-depression 1920s gave way to a more sobering, even pessimistic outlook on the direction the world was taking.

In 1932, President Franklin D. Roosevelt promised a New Deal for America, a progressive agenda affecting nearly every aspect of American life. A host of federal programs were enacted to create jobs through public works projects, including: building dams, bridges, and roads; bringing electricity to rural areas; creating parks; and building low-income housing and schools. This unprecedented federal assistance to average Americans, though seen by some as "socialist," increasingly gained favor from a majority of citizens. The Roosevelt Administration used "Stripped and Simplified" classicism for most federal government buildings, while a revival of the Arts and Crafts style, requiring significant labor and thus employing more people, was chosen for the infrastructure construction projects in national and state parks.

Also during the 1930s, the ongoing conservation and detailed reconstruction of the eighteenth-century colonial American city of Williamsburg, Virginia, helped to popularize a nostalgic appreciation for eighteenth-century neoclassicism in its American expression, often of red brick with limestone details, and recalling the time of the national struggle for independence. This Colonial Revival style, which had been in use since at least the 1880s in the wake of the Centennial Exposition (Philadelphia, 1876), was deeply attractive to Americans, who valued its idealistic associations with American history and culture and appreciated its visual characteristics. Colonial Revival as a style was widely applied to an enormous variety of public and private buildings, and it retains popularity today, although most often only through vestigial or attenuated details. This style, strongly considered "American" by Americans, provided, and still provides, an entirely different populist response to that of Wright for an "American" style of architecture, and it is a stark counterpoint to modernism in its many forms in the United States.

In the 1930s, architects and designers who had previously been working in the Art Deco style were challenged to replace it with something more appropriate to the times: a style that appeared modern but was more restrained than Art Deco. Like their European counterparts of the decade before, many turned to the machine, specifically automobiles, railroad locomotives, ships and airplanes for inspiration. Designers began to appropriate their stylistic streamlining charac-

teristics for static objects from toasters to clocks. In product design the style was called Art Moderne, but in architecture it was known as Streamline Moderne or simply Moderne.

As the Great Depression continued, Modernist ideas became more palatable to Americans. Contributing to this was the influential 1932 exhibition mounted by the Museum of Modern Art in New York, *The International Style: Architecture Since 1922*. Curated by Philip Johnson and Henry-Russell Hitchcock, it showed recent European modernist work as well as American modernist buildings, including some work by Frank Lloyd Wright. The works were presented as art objects, stripped of their original social or geographical context and aims. The catalogue touted modernism as the new architectural language that was sweeping the world, and the exhibition is significant for being an important early exhibition touting modern architecture to an American audience.

One of the most radical works presented was the Phillip Lovell House (Los Angeles, 1928), by a former Wright associate, Richard Neutra. Though based mainly on European ideas, it incorporated many features Neutra would have learned while in Wright's atelier, including horizontality and relating the building to a hillside setting. It also played a prominent role in the commission Wright received in 1935 from Edgar Kaufmann to build Fallingwater. Fallingwater was Wright's response to European Modernism. Its dramatic engagement with its sloping terrain used cantilevered forms of reinforced concrete to create a dynamic three-dimensionality that couples a sense of shelter to a feeling of openness and connection to the outdoors through terraces and windows that wrap around corners. The house was immediately famous worldwide.

During the 1930s, Wright designed a number of buildings that revived his public image and set the stage for the last two decades of his career. In addition to Fallingwater, these included buildings for the S.C. Johnson Company and a more spatially modest home for Herbert and Katherine Jacobs. He also began an ongoing construction and expansion of Taliesin West, his winter home and studio in Arizona.

Wright's foray into Streamline Moderne was the S.C. Johnson Administration Building and Research Tower (1935 and 1944). Kenneth Frampton described it as, "Wright's lifelong desire to transform the workplace into a sacramental structure." The brief for the Administration Building was similar to that of the earlier Larkin Building in that it called for a large secretarial space and ancillary offices. Here, under the influence of Moderne, Wright used circles for the organizing geometry of the building, rather than his usual orthogonal arrangement. He streamlined the exterior form by rounding the corners and wrapping the building with bands of lighter colored brick to emphasize its horizontality. Glass tubing was used for ceilings to allow light to penetrate from above, an innovative use of the material.

At Taliesin West, Wright abandoned the prevailing styles to once again demonstrate the primary importance of the landscape to the design of a modern building. Taliesin West is an original response to a harsh desert site. The mountains behind the complex are echoed in its angular shapes and create an effect that, like the desert, is raw, even primordial, yet strikingly modern in sensibility. Movement through the site, passing through a series of axes related to the topographical features, was characterized by Philip Johnson in the late 1940s as the most extraordinary and first example of what he would call the processional aspect of architecture.

The place of the Usonian House in Wright's work, beginning with the Herbert and Katherine Jacobs House, is not unlike that of the Unité d'Habitation in the work of Le Corbusier. Both came out of larger design concepts intended to reshape the industrialized city into more habitable places. The Usonian concept provided the opportunity for Wright to realize ideas he put forth in plans first outlined for "Broadacre City" (1932), an unrealized planned suburban development promoted by Wright throughout his lifetime. A life-long proponent of the Jeffersonian belief that a connection to the land was essential to a vibrant democracy, he saw Broadacre as a way to achieve this ideal for the middle class. The plan was for a fully decentralized series of automobile-centric communities connected by raised multi-laned highways. Each Broadacre community was intended to accommodate 1,400 families, with every family having a one-acre homestead. While unrealized as Wright envisioned, Broadacre City did give rise to the concept of the Usonian house.

The chief advance of the Usonian house was to introduce a design and construction method that was accessible to clients of moderate means, could be easily adapted to sites in different parts of the country, and that could meet the functional needs of varied clients. All Usonians were based on a planning grid or module, were designed for informal living, and were easily expanded. Many of the features of the Usonian house would be incorporated into suburban housing after the Second World War, including an emphasis on one-story living, electric heating, non-traditional arrangement of windows, and living and dining areas that flowed together for informal living. This highly adaptable form joined modern California houses of the World War II era to influence the design of post-war suburban houses throughout the United States. Unlike Le Corbusier's villas, Wright's Usonian houses were seen as fostering individuality and the ability of a middle-class family to have a warm and expressive house. William J. Levitt, the developer of what became ubiquitous "Levittowns" of mass-produced post-war

houses, and other contemporary builders and designers, were aware of and influenced by the Usonian houses, though such later buildings were typically much simpler and less artistic than their inspiration.

After World War II, rationalist ideas about architecture gained popularity, especially for commercial and institutional buildings. Architects such as Ludwig Mies van der Rohe and Walter Gropius were highly influential with their designs. In contrast, some architects turned away from such design theories and aesthetics in favor of more personal expressions of form and materials in their search for visually- and spatially-powerful architecture. For example, Le Corbusier surprised many with his chapel of Notre-Dame-du-Haut at Ronchamp (1955). Inspired by a crab shell he found on a beach, its beautifully-curved sculptural forms seem a product of his artistic imagination more than a rational response to functional issues.

Wright, in his search for greater spatial effects and dynamic forms, also focused on such personal expressions of space and form, in his case, focusing on extruding the spiral from the circle. He had explored the spiral's potential earlier in some unbuilt projects and in the V.C. Morris Gift Shop (San Francisco, 1948), but it was in one of his most famous works, the Solomon R. Guggenheim Museum, in which he more fully realized the spiral's capacity for energizing space. With its ramp that is also an art gallery, it shocked many who claimed it was self-indulgent and not a functional space for art. However, it soon became a beloved landmark and proved to be an extraordinary setting for contemporary installation art.

Thus, it is clear that the Modern Movement was not limited to one overarching school of thought. Many strands encompassing a variety of personal expressions were also present. In fact, it could be said that all trends within modernism started as personal expressions of theory or ideals. Only over time did certain personal expressions of modernism come together to form modernist "canons" of design as they intersected with social and economic realities. Proponents of modernism embodied differing outlooks, methods, theoretical frameworks, and cultural concerns. One approach, organicism, or what Wright termed "organic architecture," paralleled and contrasted with much of the rational modernism of Le Corbusier, Mies van der Rohe, and Walter Gropius.

However, organic architecture, like Modernism, was never a unified ideology. Rather it was, and remains today, a diverse and often contradictory tradition with its roots firmly planted in the nineteenth century, growing outward as part of the Modern Movement where three distinct strands emerged. The first, and perhaps the most prolific proponent, was the ever-evolving, ever-inventive, Frank Lloyd Wright, who drew on the theoretical writings of John Ruskin, Eugène Emmanuel Viollet-le-Duc, and Owen Jones (1809-1874). For Wright, nature, its forms and principles, was always the primary inspiration. In his Prairie houses as well as his later modern and Usonian houses, there is a poetic logic in the great chimney that seems to root the house in the earth while reaching upward to the sky. In these domestic works, he claimed to "destroy the box" by opening the house to the landscape and blurring the distinction between interior and exterior space. Always cognizant of functional and emotional needs of the inhabitants, he created rich experiences of space in a time of social change.

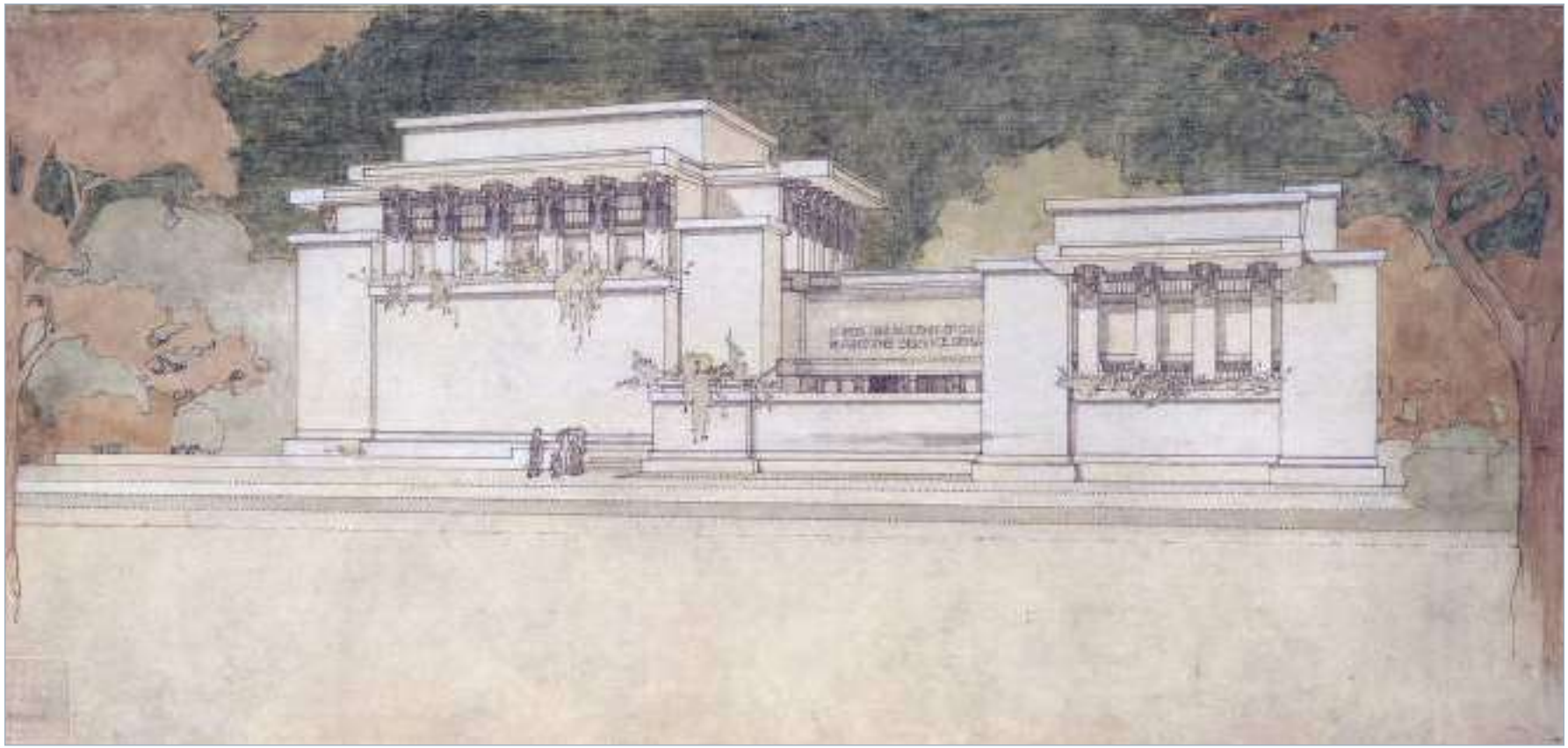
At the same time that Wright's domestic work turned outward, his institutional buildings such as Unity Temple, the S.C. Johnson buildings, and the Guggenheim Museum turned inward as if he desired to create his own internal environments untarnished by the city outside. In every case, he filled these spaces with sunlight from a created "sky" above. At Unity Temple, he wrapped the inhabitants in a complex but integrated web of line and form with colors drawn from nature. In the S.C. Johnson buildings, he created a forest metaphor in a grid of abstracted trees under a mottled, softly lit sky. Here, one of his most daring constructions, as the critic Kenneth Frampton noted, were the Administration Building's hollow thin shelled columns, which "introduced an entirely new tectonic and spatial discourse into twentieth-century architecture." This innovation inspired later structural determination of space in the work of Louis Kahn (1901-1974). At the Guggenheim Museum, earth, sky and water come together in a fusion of spatial drama by creating its own unified and emotionally rich interior that Philip Johnson called "one of the greatest rooms of the twentieth century."

The second strand includes the expressionist organicism of architects such as Hugo Häring (1882-1958) and Hans Scharoun (1893-1972), who were interested in "organic functionalism" and were both members of a group of German architects called Der Ring, which unlike CIAM, did not have a detailed program or strict ideology. Häring built little and was influential primarily through his contributions to organic theory. In *Wege zur Form* (Approach to Form, 1925) he expressed his belief that every place and task implies a form, and it is the architect's role to discover for the client what that form is and then let it unfold. A notable Häring design that was realized is his contribution to the Siemensstadt housing project (Berlin, 1929–1931), which was master planned by Scharoun, one of the chief proponents of organic design in Germany. Building on Häring's concepts of organic functionalism, Scharoun developed new spatial experiences and forms based on the careful examination of the site, functional needs, and the building's social meaning. Among Scharoun's best buildings, the Berlin Philharmonie (1963) was a radical departure from the typical orchestral hall of the time, as the audience encircled the performers and symbolically embraced them within the free-form concert space.

The third strand of organic architecture is seen in the later work of Finnish architect Alvar Aalto (1898-1976), who frequently referred to his buildings as "organisms" composed of cells that could be added to and arranged in near limitless ways. Aalto brought a clarity, simplicity, and lightness to organic design. His Paimio Sanatorium (1933; included in Finland's World Heritage Tentative list) employed efficient and economically logical industrial methods in concert with the surrounding natural site to create a humanizing environment for healing. In the Villa Mairea (Noormarkku, 1939) the clients, the Gullichens, pointed to Fallingwater in describing what they wanted in their country house, and formal elements of Fallingwater are apparent in early sketches by Aalto. Ultimately, the design took a very different form. Nevertheless, like Fallingwater, it is a unique and poetic work associated with nature on many levels, but especially through its use of natural materials and textures, as well as forms suggestive of natural processes and rhythms.

Although the formal expression of those who participated in the organic tradition varies significantly, they all share central concerns that separated them from mainstream modernism. The first is an experiential quality that called for architecture to be above all for human happiness. A second concern is that a building's form (like the forms of plants and animals) should be an outgrowth of its function. Third, buildings should express a connection to nature, including the application of nature's principles in ways such as having all the parts relate to the whole to create a unified design. This principle also applies to the honest expression of materials. Lastly, this way of thinking about design considers the manner in which a building relates to or reflects its setting and geophysical region. With these as guiding principles, shaped through the use of geometry, abstraction, and creativity, a unified totality of design can be achieved. And despite the vicissitudes of styles and time, these overarching principles of organic design continue to have currency today, especially through the influence of the work of Frank Lloyd Wright. Because he was such a prolific architect, he was able to elaborate his version of these principles in many ways, achieving highly successful syntheses of design and function. It is these works that fully and coherently express those principles that form this nominated series.

2.b: UNITY TEMPLE
OAK PARK, ILLINOIS



Unity Temple, Presentation drawing showing west elevation.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0611.003.

UNITY TEMPLE is the home of the Unity Temple Unitarian Universalist Congregation of Oak Park and has not experienced significant changes.

In 1871, a merger of Unitarians and Universalists formed a new congregation, Unity Church. When Frank Lloyd Wright, his mother, and sister moved to Oak Park in 1887, they lived with Auguste Chapin, the minister of the Unity Church congregation, for about two years. The original church building, a traditional Gothic-inspired design with a tall steeple, burned to the ground after being struck by lightning in June 1905. The congregation, led by its minister, the Reverend Rodney Johonnot, had been raising funds for a new building since 1901. Rather than rebuild on the original site, the congregation chose the present site, which was owned by Edwin Gale, a prominent member of the congregation.

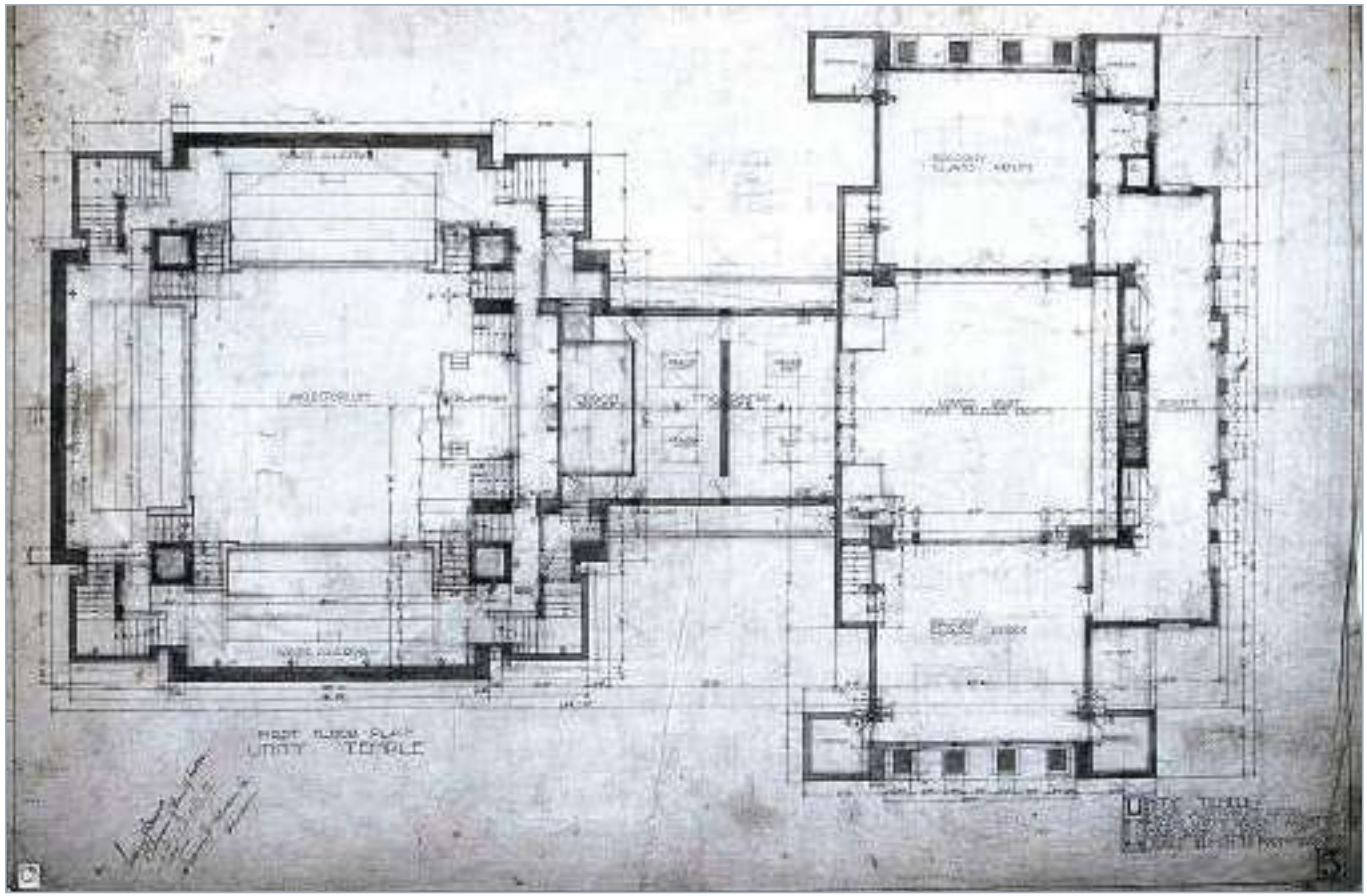
Nine architects were interviewed and invited to submit designs. Charles Roberts, the head of the building committee, had been a client of Wright's as were several other congregation members. With the agreement of the minister, Wright was chosen in September 1905 to design the new Unity Church. Johonnot was particularly concerned that the design embody the principles of Unitarianism, namely unity, truth, beauty, simplicity, freedom, and reason. Wright's design was accepted by March 1906; ground was broken on May 15, 1906. In June 1906, Wright and Johonnot wrote *The New Edifice of Unity Church, Oak Park, Illinois*, that explained the design and the reasons for its adoption. Work encompassing both the Temple section and Unity House was completed in October 1908. Not only had Wright, with Johonnot's backing, persuaded the congregation to accept a thoroughly modern, unconventional design that was in keeping with the ideals of the liberal church, he also proposed to build in the unconventional material of concrete, arguing that the costs would be much less than a more traditional building of brick or stone.

Although Wright produced the accepted design for Unity Temple by March 1906 in important respects, the building he had then envisioned was not the church completed in 1908. Instead, each step prompted alterations, so that Unity Temple continued to develop while being built. As the building rose, Wright rethought key issues of structure and surface throughout, weighing options to the last moment, and in some instances replacing partially completed work. The changes in Unity Temple exemplified an important yet elusive quality of Wright's architecture—that a work develops conceptually as it builds physically. To save lumber and permit multiple reuse of wood forms into which the concrete would be poured, all formwork was made from one size of wood boards assembled into standard units. Designing Unity Temple to fit such units also minimized joints so the face of the walls appears unbroken.

From shortly after its completion, Unity Temple's architectural importance was recognized by the congregation. This prompted a concern regarding the eventual use of adjacent properties. In 1915, the house and lot at 124 Kenilworth Avenue, directly south of Unity House, was acquired to protect the site from new construction.

Soon after the building's completion, however, problems began to surface which raised other concerns for the congregation. Most of the problems were associated with the cutting-edge nature of the building's technology and design. First, the forced-air heating system located in corner piers proved ineffective and steam pipes and radiators had to be added early in the building's history. Then by the late 1930s, because of a series of failures in the complicated roofing system, damage to interior and exterior finishes of the building had occurred. The building's complex volumetric design required seventeen separate segments of flat, composition roofing which proved difficult to maintain. Although the original roofing was designed to last twenty years, the Great Depression postponed needed attention until 1939, and water damaged the concrete and its reinforcing.

It was not until the early 1960s that members of Unity Temple congregation made major efforts to renew and repair their building. The exterior concrete surfaces were originally an exposed pea gravel aggregate finish. In 1961, to obscure surface cracks, a bonding agent (Albitol) was applied to the surfaces, then removed in the early 1970s and replaced by Gunite, a pneumatically applied concrete that allowed the original finish to be replicated.



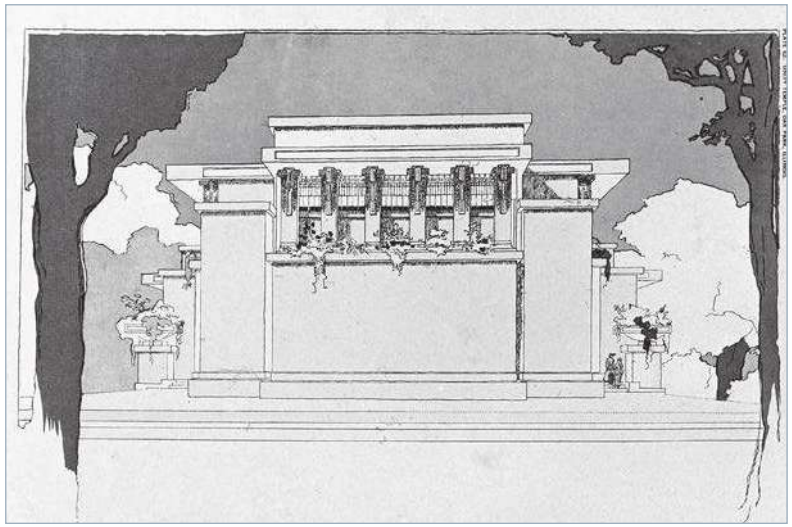
Unity Temple, Plan of auditorium/ worship space level.

The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0611.012.

Interior work was also undertaken in the 1960s. The basement cloakrooms below the auditorium were converted to toilet and washrooms. Partition walls were added to the balconies in Unity House to create additional classroom space. In 1984 after thorough investigation, they were restored to their original colors. In 1987 the Unity Temple Restoration Foundation commissioned a comprehensive, detailed report on the building's condition and on future priorities for its conservation and preservation.

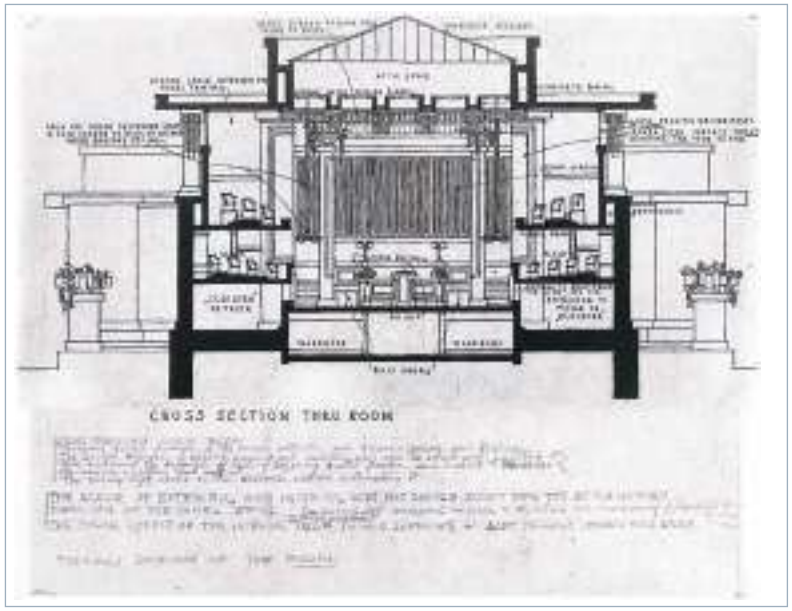
Since 2008, there have been multiple preservation projects undertaken in response to various types of damage and deterioration, particularly water infiltration that damaged the plaster and concrete. These repair projects culminated in a comprehensive restoration project in 2015-2016 based on the *Master Restoration Plan for Unity Temple* (2010; discussed in Section 4). The completion of this project, which addressed structural issues as well as interior and exterior finishes, has returned the building to an excellent state of preservation.

Today, Unity Temple still fulfils its original function. Its auditorium/worship space is used for religious services, performance, assembly and as a meeting hall while Unity House is used for informal gatherings with related classroom spaces and offices.



Unity Temple, presentation drawing of north elevation as published in Ausgefürte Bauten und Entwürfe von Frank Lloyd Wright *(Berlin: Ernst Wasmuth A.-G., 1910).*

The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0611.087.



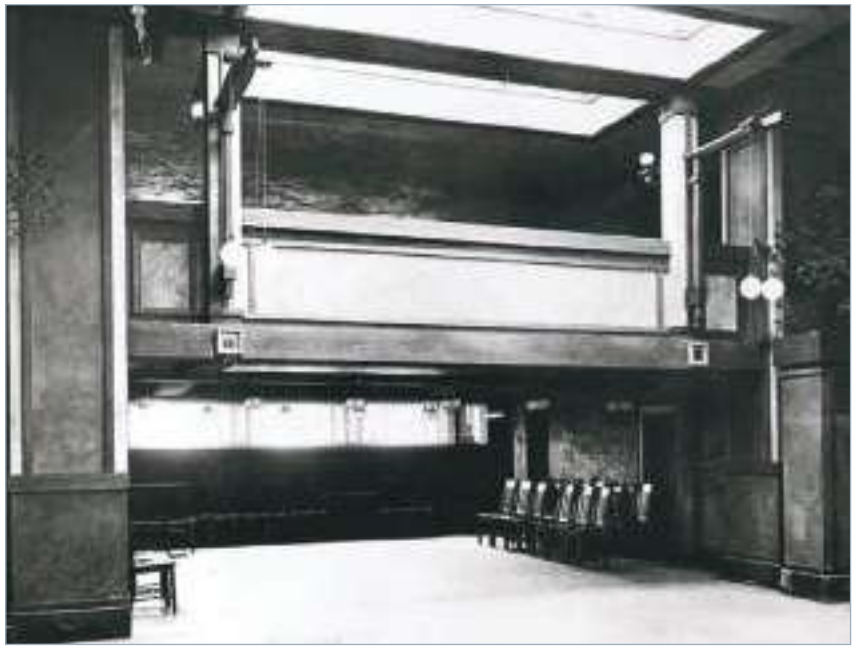
Unity Temple, view of west elevation during construction, 1909.

Photograph by Henry Feurmann, courtesy of the Unity Temple Restoration Foundation.

Unity Temple, cross section drawing through auditorium/worship space.

The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0611.111.

Unity Temple, interior of auditorium/worship space, view looking south, 1910.
Photograph by Henry Feurmann, courtesy of the Unity Temple Restoration Foundation.



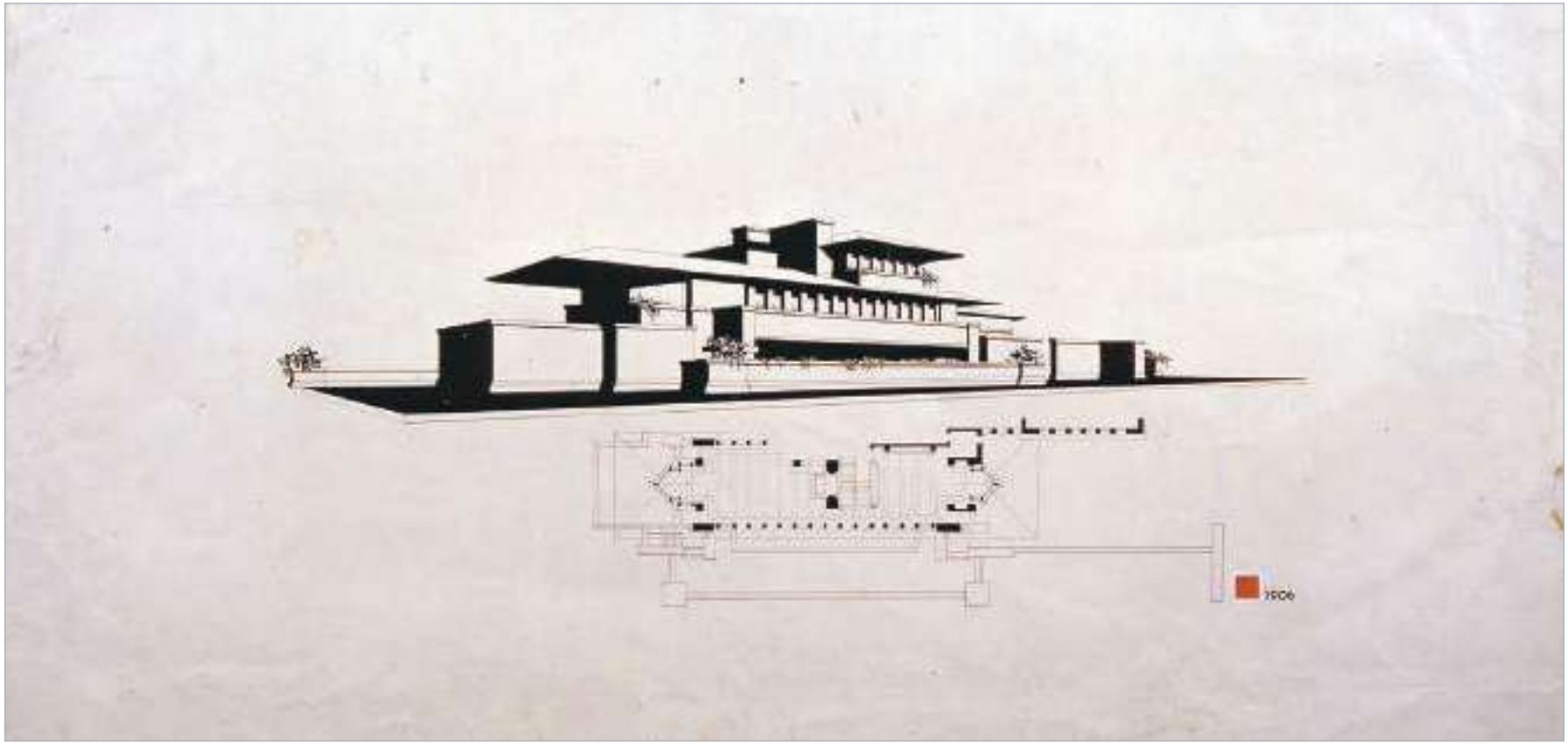
Unity Temple, interior of Unity House, view looking west, 1910.
Photograph by Henry Feurmann, courtesy of the Unity Temple Restoration Foundation.

Unity Temple, west elevation, June 1967.
Photograph by Philip Turner, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS ILL, 16-OAKPA, 3–1.

Unity Temple, interior of auditorium/worship space looking southeast, June 1967.
Photograph by Philip Turner, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS ILL, 16-OAKPA, 3–4.

Unity Temple, interior of Unity House looking north, June 1967.
Photograph by Philip Turner, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS ILL, 16-OAKPA, 3–5.

2.b: FREDERICK C. ROBIE HOUSE CHICAGO, ILLINOIS



Frederick C. Robie House, presentation drawing showing perspective of south elevation and first floor plan.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0908.003.

COMMISSIONED IN 1908 and completed in 1910, Frank Lloyd Wright's house for Frederick C. Robie has been long regarded as the epitome of his Prairie house designs. Robie, a successful manufacturer of bicycles and sewing machines, was eager for a house that incorporated the latest in design and technology. He told Wright that he wanted a fireproof, reasonably priced house. Wright obliged with a design that was generally fire resistant and fully modern in its use of technology, but not inexpensive. The construction of the astonishing cantilevered roof was enabled by the use of rolled steel beams, similar to those used in shipbuilding. It also incorporated a very early attached three-car garage, complete with maintenance pit.

The Robies' tenure in the house was short, and the house was sold in 1912 to Marshall D. Wilber and his family. The Wilbers lived in the house until 1926, when it was sold to the nearby Chicago Theological Seminary (CTS) which used it variously as a women's dormitory, classroom building, and conference center, functions not easily compatible with the original design. During this time many of the original fixtures and furnishings were removed, and the portion of the perimeter wall that enclosed the automobile court was lowered from 2.4m to 0.91m.

In 1941, CTS proposed to tear down the house to make way for a new building that would better suit its needs. Wright involved himself in saving the building at this time, and other leading international architects (including Ludwig Mies van der Rohe, Ludwig Hilberseimer, and Walter Peterhans) and several museum directors rallied to keep the Robie House standing. That same year, a round-table discussion group, led by architectural historian Henry-Russell Hitchcock and composed of prominent American professors and curators of architecture, met to organize support for the preservation of historic architectural monuments. They called the possible demolition of the Robie House a potential "catastrophe" and issued a call to action.

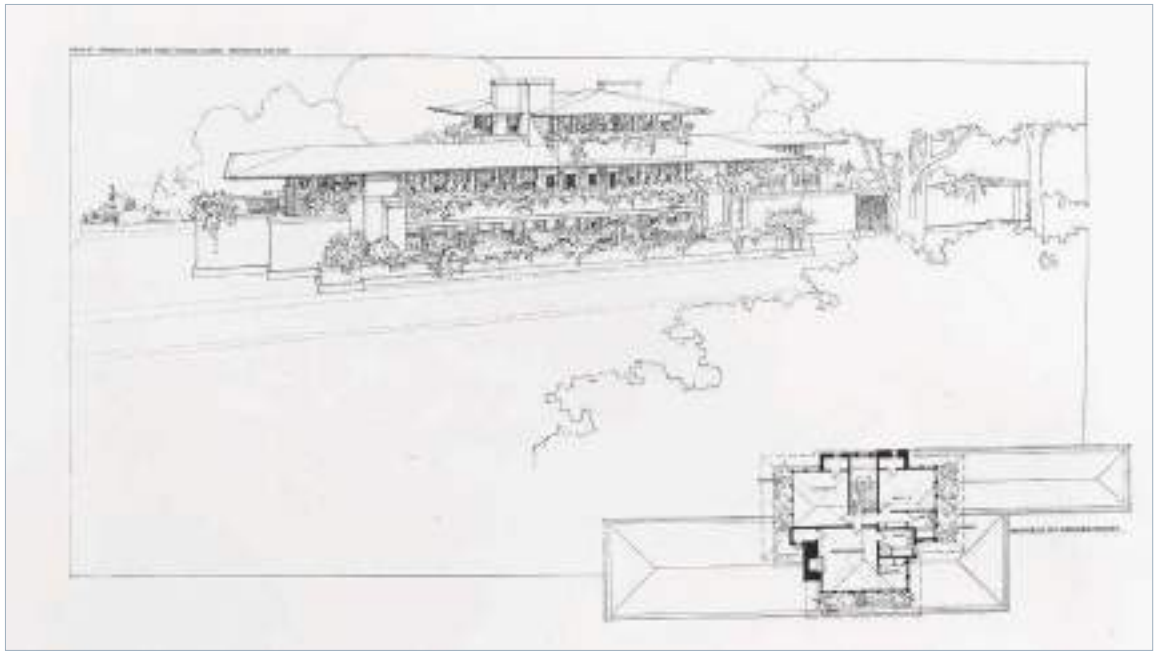
The proposed 1941 demolition was delayed partly by World War II and the reduced availability of building materials. The future of the Robie House continued to be uncertain and in a 1951 letter to Chicago architect Alfred Shaw, the architect and Museum of Modern Art (New York City) curator Philip Johnson, as well as the museum's Director of Collections Alfred Barr, expressed their concerns over a rumor that CTS was again attempting to demolish the house.

In 1957, the Chicago Theological Seminary once more publicly proposed tearing down the house, ironically on the heels of the house's recognition by an esteemed panel of architects in *Architectural Record* as the most significant residence of the previous fifty years. Upon learning of the plans to replace the Robie House with a new dormitory, architects and Chicago politicians alike were propelled to action, including contacting a range of elected officials, historians, college presidents and architects, including a number in Europe.

An "alert committee" was also formed as a joint effort between the American Institute of Architects (AIA) and the Society of Architectural Historians. The editor of the *Architectural Record* encouraged a letter writing campaign, and Vincent Scully's architecture students at Yale University also contributed. Ultimately, William Zeckendorf, head of the New York real estate firm of Webb and Knapp, bought the Robie House in December 1957, saving it from demolition.

In addition to being named the most significant house of the years 1907-1957 by *Architectural Record*, 1957 also saw the Robie House designated as a landmark by the Commission on Chicago Architectural Landmarks and as the "House of the Century" by *House and Home* magazine in 1958. The Robie House Committee (later the Committee for the Preservation of Robie House), chaired by Ira J. Bach, Chicago City Planning Commissioner, was organized in late 1962 and included a long list of notable Chicagoans and influential international architects and academics such as Siegfried Giedion, Bertrand Goldberg, Walter Gropius, Edgar Kaufmann, jr., Lewis Mumford, Ludwig Mies van der Rohe, and William Wurster.

Webb and Knapp had purchased the house to use as construction headquarters for neighborhood redevelopment projects, but in 1962, it offered to donate the house to any responsible agency that would preserve it. On February 4, 1963, the University of Chicago offered to do so, provided that outside parties raise the money for preservation costs. An international committee eventually collected enough money so that Taliesin Associated Architects could undertake modest



Frederick C. Robie House, perspective drawing of south elevation and second floor plan as published in Ausgefürte Bauten und Entwürfe von Frank Lloyd Wright *(Berlin: Ernst Wasmuth A.-G., 1910).*

The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0908.034.

steps for its repair. In this phase, the tile roof was replaced and new heating and electrical systems were installed. The University of Chicago then used the house for offices. The University also opened the living room and dining room to public tours on a limited basis.

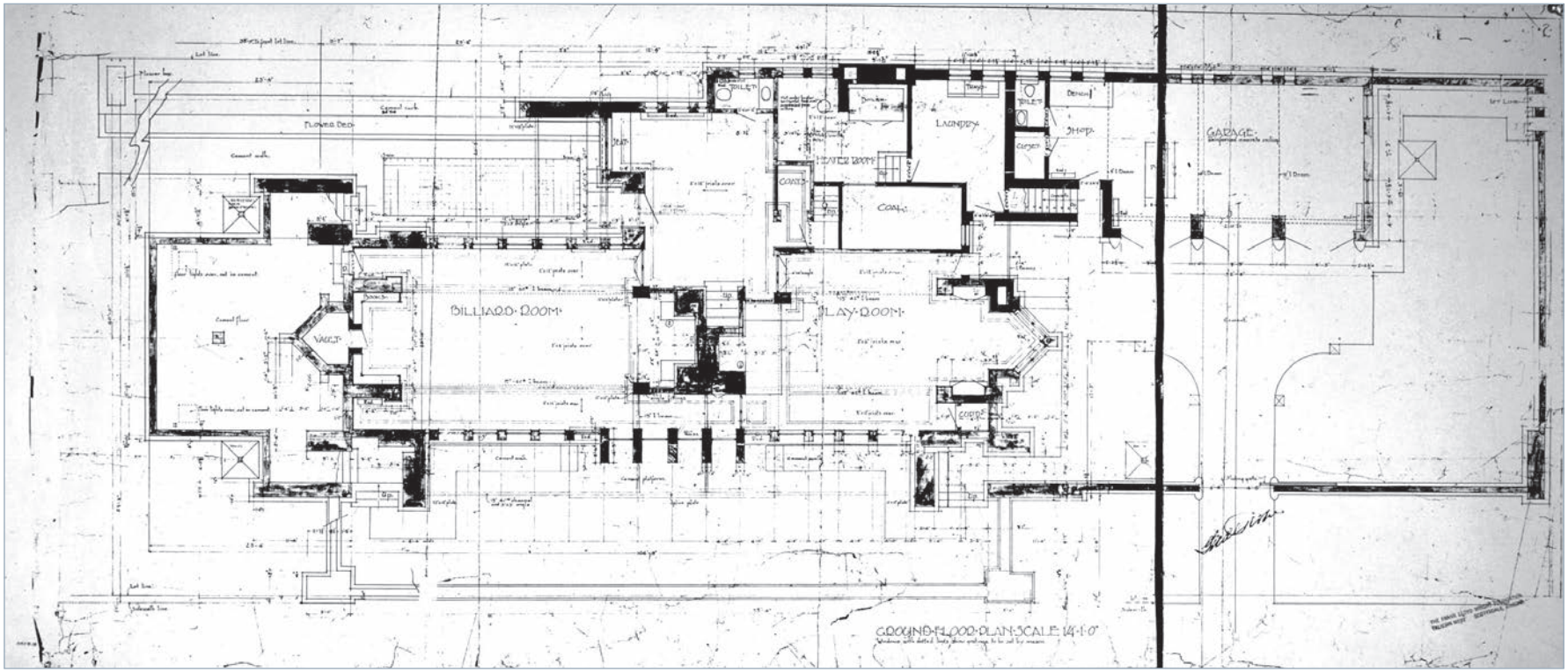
In 1997, the University entered into a three-party agreement with the National Trust for Historic Preservation as lessee, and the Frank Lloyd Wright Preservation Trust (now called the Frank Lloyd Wright Trust) as sub-lessee, in which the Preservation Trust would take responsibility for conservation, preservation and ongoing management of the Robie House as a historic site and an accredited museum. (In 2012 the Frank Lloyd Wright Trust became the sole lessee.) In 1997, a conference was held to review a draft of the Master Plan for Restoration and Adaptive Use of the Robie House and to gather input on the plan from eleven external architects, historians, scholars and staff. In 1999 a ten-year preservation program was launched.

A US$4 million exterior preservation effort was completed in July 2003. It stabilized the building by preventing further water infiltration and repairing termite-damaged areas. Work also included conservation of water damaged areas, installation of a historically accurate clay tile roof, re-plastering of deteriorated soffits, extensive masonry repairs, replacement of damaged bricks and limestone, and stabilization or reconstruction of balconies.

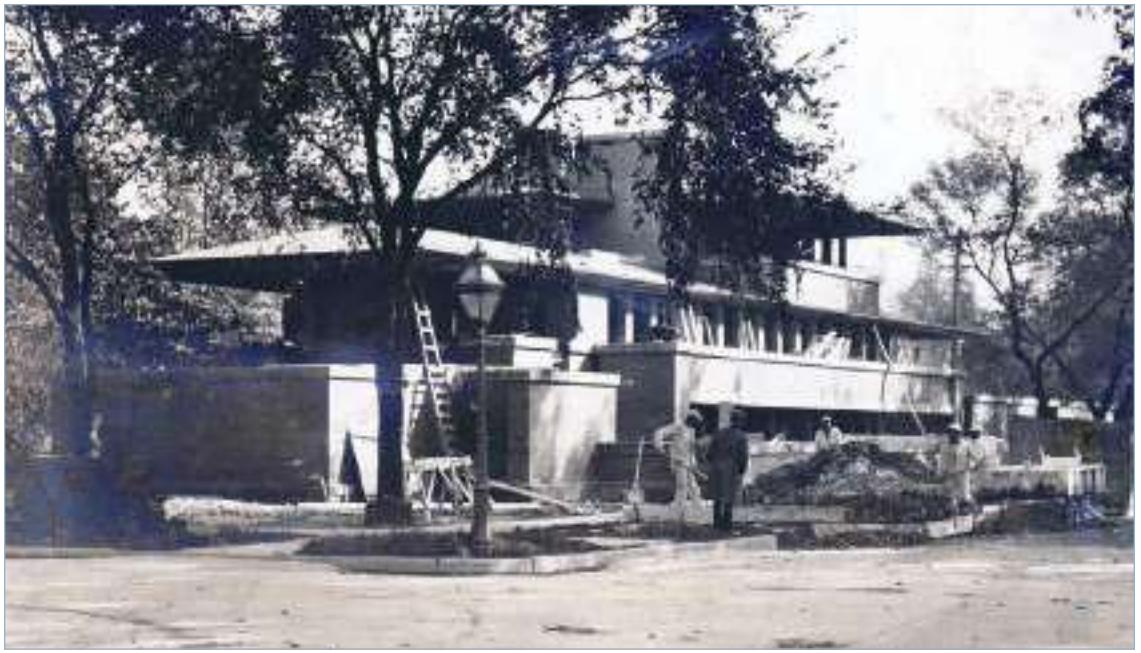
The conservation of twenty-two art glass doors and windows was completed in 2005. All internal electrical wiring was also updated and new water service introduced, a climate management system, an interlocking aspirating fire detection system and a dry-pipe sprinkler system were installed.

Between 2007 and 2009, a second phase of preservation work focused primarily on the interiors was undertaken. These included conservation of plaster, wood floors, wood trim, and light fixtures in the servants wing and conservation of plaster and woodwork on the third floor. One exterior project included installation of a reproduction set of iron gates in the courtyard. The final phase, taking place in 2018, consists of conservation of leaded art glass windows, interior and exterior lighting, woodwork, wall finishes and coloration, carpets and furniture, and will complete the restoration of Frank Lloyd Wright's original vision for the house.

Today, the Frederick C. Robie House is operated by the Frank Lloyd Wright Trust as a public museum.



Frederick C. Robie House, ground floor plan.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0908.018.



Frederick C. Robie House, view of south elevation during construction, 1909.
Photograph courtesy of the Frank Lloyd Wright Trust.

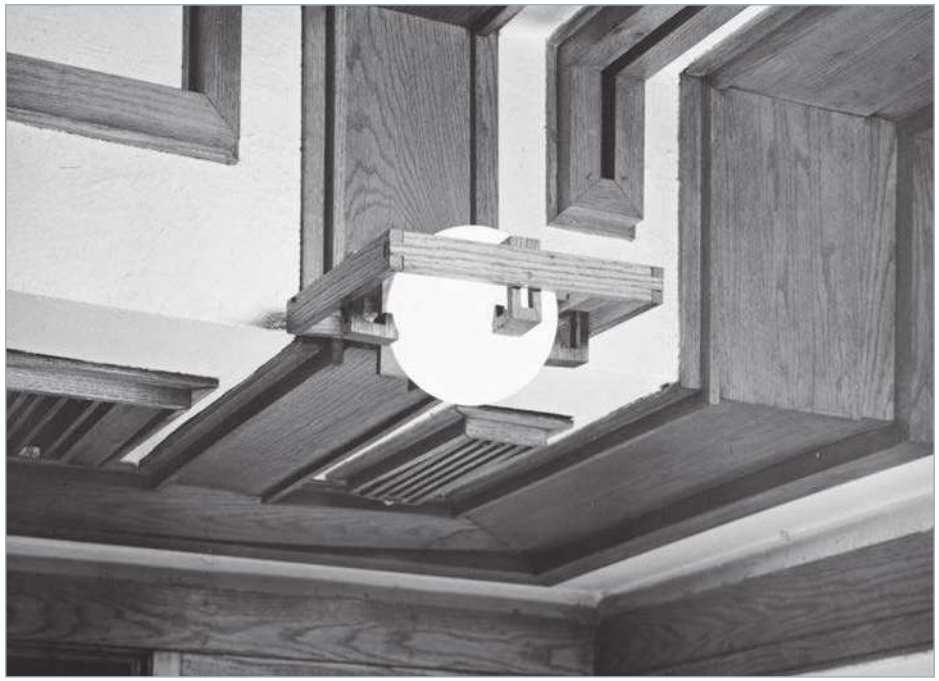
Frederick C. Robie House, view of south and west elevations, ca. 1925.
Photograph courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view of living area looking east, 1910.
Photograph courtesy of the Frank Lloyd Wright Trust.

Frederick C. Robie House, view of dining area looking northeast, 1910.
Photograph courtesy of the Frank Lloyd Wright Trust.

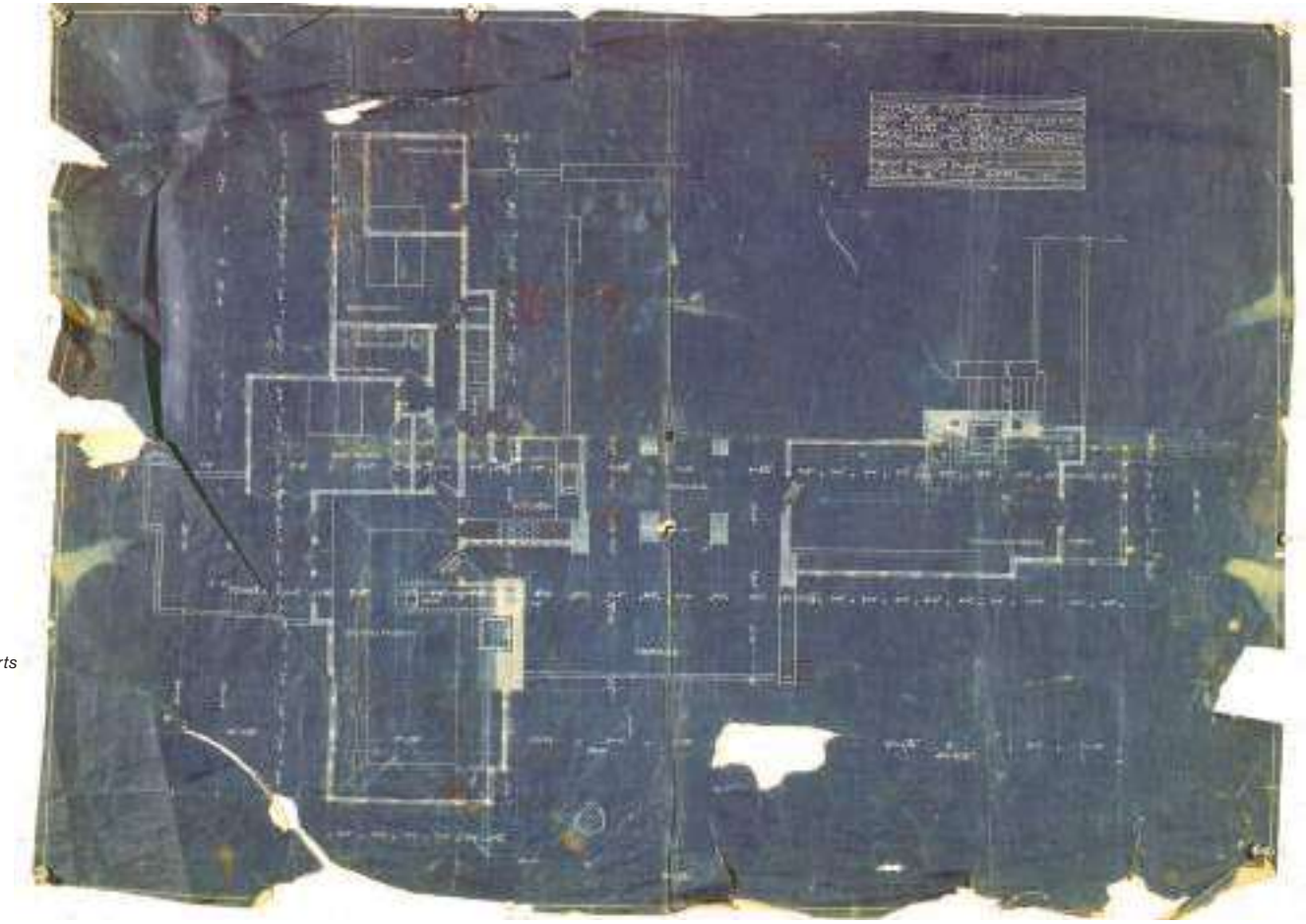
Frederick C. Robie House, view looking south, August 1963.
Photograph by Cervin Robinson, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS ILL,16-CHIG,33-4

Frederick C. Robie House, view of west elevation, August 1963.
Photograph by Cervin Robinson, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS ILL, 16-CHIG, 33–5.



Frederick C. Robie House, interior detail, light fixture, August 1963.
Photograph by Cervin Robinson, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS ILL, 16-CHIG, 33–9.

2.b: TALIESIN
SPRING GREEN, WISCONSIN



Taliesin, first floor plan [titled as "Cottage for Mrs. Anna Lloyd Wright" (the architect's mother)], April 1911.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1104.001.

THE CREATION OF TALIESIN was the work of many years by Frank Lloyd Wright. Directly supervising all building himself, Wright experimented at Taliesin with construction techniques and design concepts he later used in buildings for clients.

In 1911, following the end of his marriage to Catherine Tobin Wright and his return from Europe, Wright purchased land in south-central Wisconsin, adjacent to the Hillside Home School run by two of his aunts as well as property owned by other family members. There, Wright built Taliesin (a Welsh word meaning "shining brow") on a long ridge that descended from the crest of the hill. The one-story structure, originally intended as a cottage for his mother Anna Lloyd Wright, included three main wings—the residential wing for Wright, his partner, Mamah Borthwick, her children, and guests, as well as an office and drafting studio wing where Wright conducted business when not in Chicago. There was also a farm wing, with stalls for cows and horses, and space for milk storage. The limestone was quarried nearby, and the plaster and mortar contained sand from the Wisconsin River. Wright constructed the buildings with the help of local masons.

On August 15, 1914, one of the Taliesin servants set the residential wing on fire and killed seven people, including Borthwick and her two children. Wright was in Chicago at the time; he vowed to rebuild. During the next ten years, the drafting studio was enlarged twice, and the westernmost sections added, which included a second horse stable, a root cellar, an icehouse, a garage for farm vehicles, chicken coops, a pigsty, and a granary. After the residential section of Taliesin was again partially destroyed by fire in April 1925, Wright again persevered and within days of the fire began rebuilding, incorporating the fire-burned stones. Wright continued to experiment, modify, and change the building until his death in 1959, but the area at the center of the Taliesin complex maintained its original configuration.

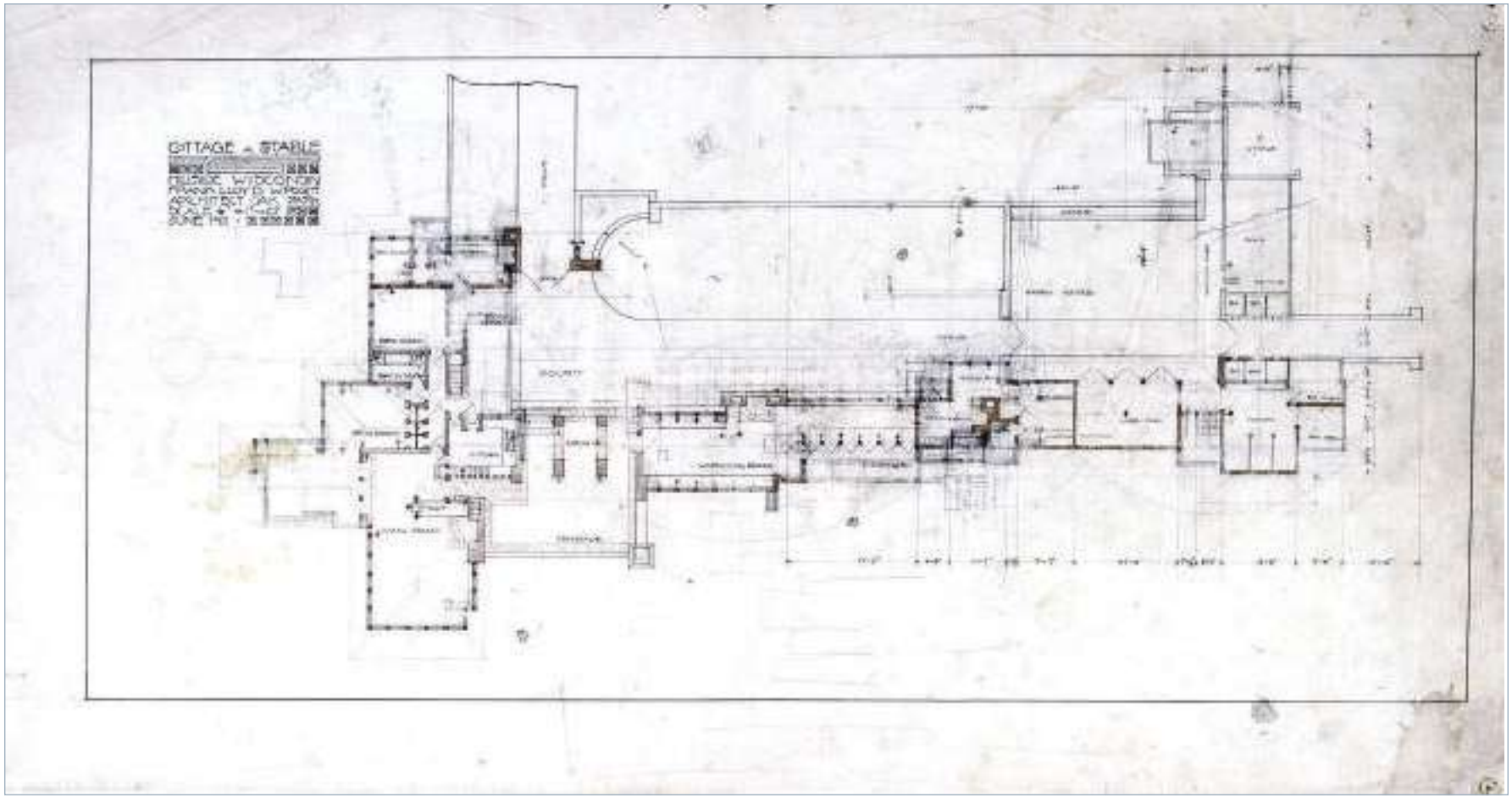
In 1932, Wright and his third wife, Olgivanna, established the Taliesin Fellowship for the training of young architects. The presence of the apprentices in the Fellowship resulted in many alterations at Taliesin. The fellows were housed in the farm wing, which they redesigned, under Wright's supervision, into their own living quarters. With apprentice labor, Wright added a third floor to the residential wing (1933, 1943), expanded his bedroom twice (1936, 1950), added onto the hill wing to serve as the first Fellowship dining room (1930s), constructed the lower court (1939), and added carports after World War II, to put parking areas out of sight from the living quarters.

The advent of the Fellowship also led to expansion and changes to other earlier buildings on the larger property in the proposed buffer zone. In the years after World War II, contour plowing was instituted and the gardens were expanded; fences and old sheds were removed and power and telephone lines placed underground; roads were graded and slopes reshaped; changes were made to the dam and the stone sections rebuilt; and stone parapets were added to the bridge.

Following Wright's death in 1959, Taliesin remained in the ownership of the Frank Lloyd Wright Foundation and has continued to be used between April and October by the Taliesin Fellowship and the School of Architecture at Taliesin as a summer residence and campus.

In 1988, the State of Wisconsin established a blue-ribbon commission to determine the best way to protect and preserve Taliesin, in keeping with the national significance of the site. As a result, the Taliesin Preservation Commission (now Taliesin Preservation, Inc., [TPI]), was founded in 1990 to preserve, restore, and maintain the Taliesin estate. Because the estate represented the culmination of five decades of architectural evolution of this site, preservation and conservation has focused on its appearance during the last decade of Wright's life.

Since its founding, TPI has undertaken several preservation projects focused on Taliesin's main house complex including: a Conservation Management Plan (completed in 1993 by Taliesin Architects); the preservation and repair of Wright's terrace (completed in 1993); the rehabilitation of the hill wing apartments (completed in 1994); the preservation and reconstruction of the terrace for Wright's office studio and lower court's cantilevered pier and slab (completed in 1995); the preservation of Olgivanna Lloyd Wright's bedroom exterior (completed in 1996); and the comprehensive preservation of the studio office wing following damage



Taliesin, first floor plan [titled as plan for cottage and stable], June 1911.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1104.003.

caused by an oak tree falling on the building in 1998 (completed in 2000). In addition, in 2005, a "Save America's Treasures" grant funded the following projects at Taliesin: stabilization of the hillside beneath the main house, installation of site drainage, foundation underpinning, major roof repairs, and rehabilitation of the entry bridge by the waterfall. Additional conservation policy and planning documents have been developed since this work was completed (see page 272).

Taliesin, and the Taliesin estate, are open for public visitation. Taliesin also contains living spaces for members of the Taliesin Fellowship, office spaces for the Frank Lloyd Wright Foundation, and other workspaces. The other buildings in the buffer zone serve a variety of uses including an archives building and storage for maintenance equipment. Taliesin's visitor center and bookstore are located outside the buffer zone.

(Top left) Taliesin, postcard view of the hill crown with Frank Lloyd Wright's drafting studio on left and the residential wing on right, 1913-1914.
Photograph courtesy of Taliesin Preservation, Inc.

(Bottom Left) Taliesin, postcard view of the carriage path with hayloft in background and Frank Lloyd Wright's drafting studio at right.
Photograph courtesy of Taliesin Preservation, Inc.

(Below) Taliesin, view of loggia looking southeast, 1915.
Photograph by Henry Feurmann. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1403.0033.

Taliesin, view of dining corner in living room looking southeast, 1915.
Photographer unknown. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 2501.0038.

Taliesin, living room view looking west, with (left to right): Frank Lloyd Wright, Richard Neutra, Sylvia Moser with baby, Kameki Tsuchiura, Nobu Tsuchiura, Werner Moser, and Dione Neutra with cello, 1924.
Photographer unknown. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1403.0076.

Taliesin, view of guest room, 1925.
Photograph by Henry Feurmann. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 2501.0017.

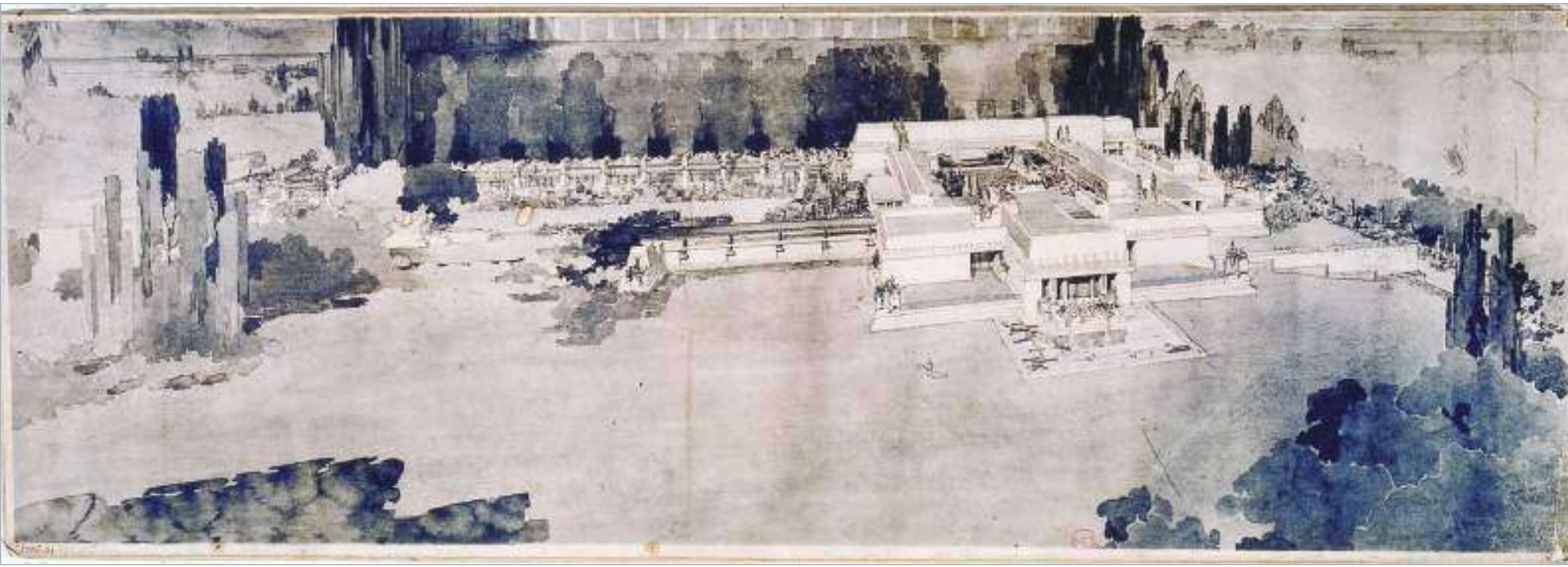
Taliesin, view of dining are looking southwest, 1928.

Photographer unknown. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 2501.0058.

Taliesin, view of the loggia looking southeast, 1952.

Photograph by Pedro Guerrero, courtesy of Taliesin Preservation, Inc.

2.b: HOLLYHOCK HOUSE
LOS ANGELES, CALIFORNIA



Hollyhock House, presentation drawing showing aerial view looking northeast.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1705.061.

ALINE BARNSDALL, an oil heiress and patron of the arts and theater, met Frank Lloyd Wright in Chicago in 1914. Preliminary discussions for a theater became concrete in 1919 when Barnsdall purchased a 14ha tract in Hollywood, California, with a distinctive hill rising approximately 36m above street level, and called Olive Hill for the olive grove on its slopes. Barnsdall wanted to create an arts complex there that would include a theater for the production of avant-garde plays, a cinema, studios for artists, housing for actors and director, and a personal residence.

Known as Hollyhock House, the Barnsdall residence was Wright's first southern California commission. Work began on the residence and two guesthouses in 1919 and ended in 1921. Difficulties between Barnsdall and Wright, who was in Tokyo, Japan, supervising the construction of the Imperial Hotel, stalled the project. With Wright's encouragement and involvement, Barnsdall subsequently engaged Wright's construction supervisor, Rudolph Schindler, to complete plans for the second floor and Lloyd Wright (the architect's son, Frank Lloyd Wright, Jr.) to execute the landscaping.

In 1923, Barnsdall again hired Wright to design a private school for her daughter on the property. The foundation was laid, but the project was not completed. Schindler was engaged to adapt the area as a garden terrace, now known as the Schindler Terrace, using Wright's footprint and materials.

In 1927, Barnsdall made a gift of the property to the city. The gift included Hollyhock House, Residence "A," the Spring House, and the Schindler Terrace, as well as 4.65ha for use as a public park in memory of her father, oil tycoon Theodore Barnsdall. (The gift did not include Residence "B," and it was razed in 1954.)

Hollyhock House was leased by the City to the California Art Club, a local organization of painters, sculptors, architects, and designers, between 1927 and 1942. From 1946 to 1956 the house was leased to Dorothy Clune Murray as headquarters for the Olive Hill Foundation with the purpose of promoting cultural research. The Foundation began to rehabilitate the house under the direction of Lloyd Wright. Men's and women's toilets, a utility room, and cellar were added, and a new kitchen was designed and installed. The residence was then used for a variety of civic functions and administrative purposes and opened for limited architectural tours.

In 1974, the city began the first major preservation effort before opening it as a public house museum on October 15, 1975, focusing on two objectives: infrastructure renewal and systems upgrades; and removal of 1946 "improvements" and return to 1921 conditions. Infrastructure renewal included a new roof, rebuilding of crumbled terrace walls, art stone conservation and preservation, dry rot and termite mitigation which included replacement of hardwood floors, and plaster and stucco conservation and restoration on both the interior and exterior. Systems upgrades included addressing unsafe electrical issues, new furnaces, and plumbing. The return to 1921 conditions included the replacement of the living room porch roof and covered pergola (both removed in 1946), and the entry hall spindle screen.

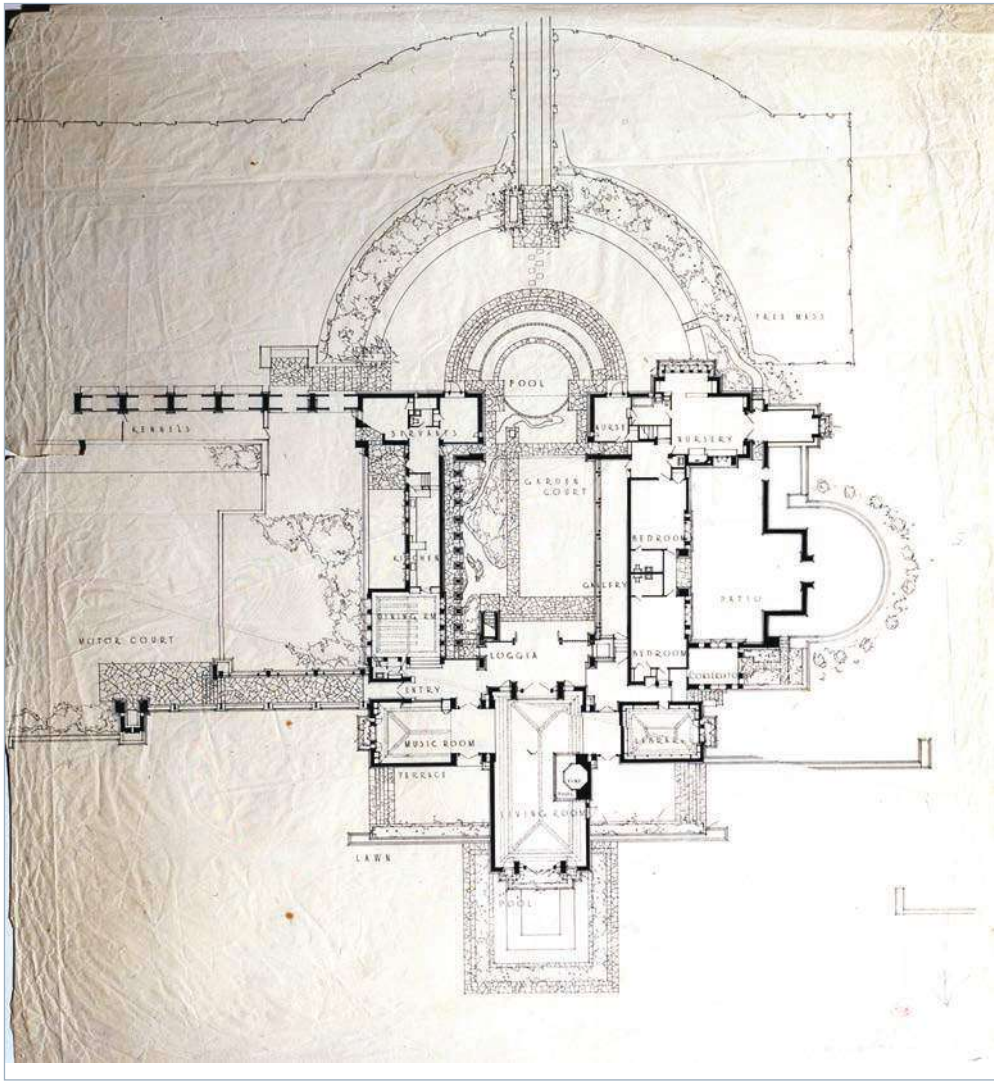
A historic structure report for Hollyhock House was written by Archiplan Urban Design Collaborative and Martin Eli Weil in 1992. A historic site survey by Levin and Associates, completed in 1995, was the basis of a master plan for the rehabilitation of Barnsdall Park. The preservation work took place between 2000 and 2005. During this same period Hollyhock House and the attached garage were repaired and seismically stabilized. Seismic retrofitting included the insertion of steel reinforcing beams invisibly into the ceiling of the principal public rooms and the entry pergola plus the garage and chauffeur's quarters to correct misalignments caused by the 1994 Northridge earthquake. To accomplish this, the entire exterior cast art stone frieze was removed and each piece cleaned and conserved as necessary. The entire wood roof was reconstructed allowing for the replacement of dry rot in some roof supports and the installation of flashing. Interior and exterior plaster and stucco was conserved or replaced as conditions warranted. This preservation work also included mold abatement. As part of ongoing preservation of the interior spaces, a replica of the original dining room light fixture was created and installed in 2009. Additionally, replicas of three rugs used by Barnsdall to furnish the interiors have been replicated.

From 2009 to 2012 preservation work was performed on the garage and chauffeur's quarters, the porch, the terrace wall, and the library foundation. The garage interior was refurbished for adaptive use as a visitor center and museum retail space. The only original existing surfaces (concrete floor, some lath and plaster) were preserved, with the lath and plaster exhibited as an artifact behind Plexiglas. Windows have been reproduced to recreate the original fenestration. Heating and ventilation systems, lights, telephone, and data lines have been added. Basement doors and windows were restored. The chauffeur's quarters, converted to public restrooms in the 1950s, has been refurbished for use as archive storage.

Other work included preservation of the porch roof, a 1970 replacement of the roof Lloyd Wright removed in 1946. The roof which suffered from severe water penetration, was entirely removed, as were all remaining Lloyd Wright alterations adjacent to the porch. The original form and pitch to the porch roof were recreated and an invisible drainage system installed to prevent future water penetration. The interior of the porch is presently being restored to its 1921 appearance.

The residence, now largely restored, is currently open for tours as a house museum and also contains exhibition space.

Residence "A" was used for children's art classes between 1927 and 1967. From 1967 until 2000, when it was closed for the implementation of the first phase of the Barnsdall Park master plan, it functioned as a facility for adult art education classes. In October 2009, an historic structure report on Residence "A" was completed by LSA Associates, Inc. The building is currently under restoration.

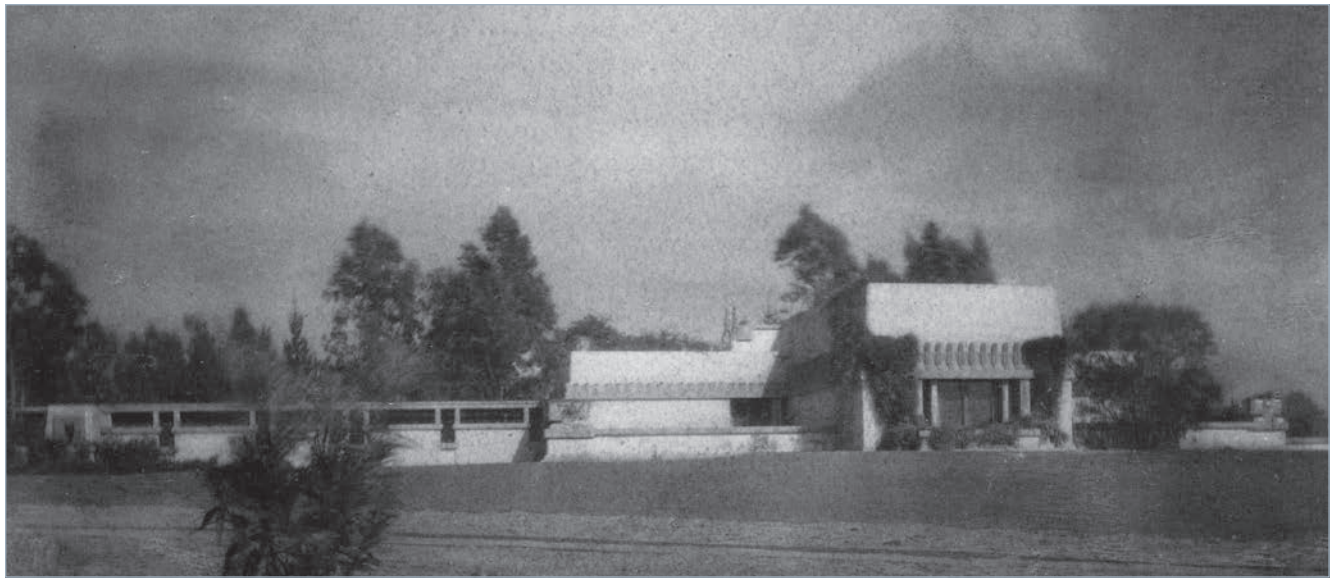


Hollyhock House, ground floor plan.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1705.052.

Hollyhock House, aerial view looking northwest, circa 1923.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1705.0125.

Hollyhock house, view of garden court looking south.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 1705.0090.

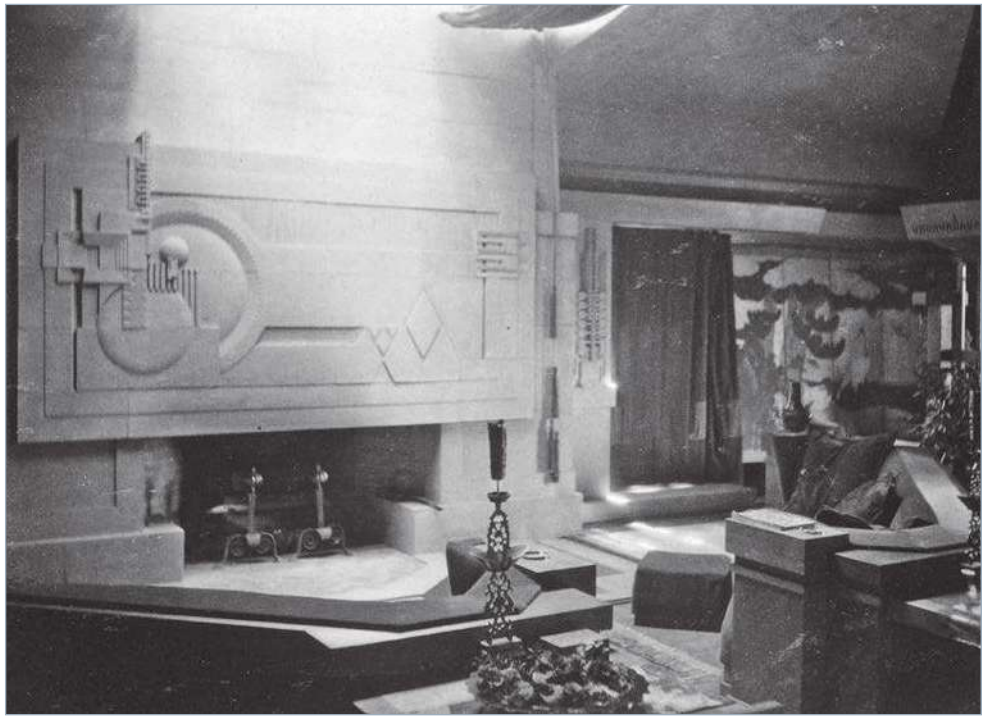
Hollyhock House, view of south terrace, 1923.
Photograph by Aline Barnsdall, courtesy of Hollyhock House.



(Left) Hollyhock House, view of west elevation, circa 1923.
Photograph by Viroque Baker, courtesy of Clare Graham and Hollyhock House.

(Below left) Hollyhock House, view into dining room from entry looking east, 1923.
Photograph by Viroque Baker, courtesy of Clare Graham and Hollyhock House.

(Below) Hollyhock House, view into living room southeast, circa 1923.
Photograph by Viroque Baker, courtesy of Clare Graham and Hollyhock House.



Hollyhock House, view of south elevation, September 1965.
Photograph by Marvin Rand, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS CAL,19-LOSAN,28–5.

Hollyhock House, view of kitchen looking west with dining room beyond, circa 1948.
Photograph courtesy of Hollyhock House.

2.b: FALLINGWATER
MILL RUN, PENNSYLVANIA

Fallingwater, presentation drawing showing south and west elevations.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3602.004.

FALLINGWATER, AMONG THE world's best-known private residences, was designed in 1935 and built between 1936 and 1939 as a weekend house for Pittsburgh department store magnate Edgar J. Kaufmann and his wife Liliane.

Initially the property called Bear Run, after the stream, or run, that flows through it, was leased by Kaufmann's Department Store and became known as Kaufmann's Summer Club, a retreat that was used primarily by female store employees. The Kaufmann family had built a prefabricated weekend cabin in 1921 on the property overlooking the stream. By 1932, the family had acquired title to the entire property from the business. The Kaufmanns' son, Edgar, jr., became an apprentice to Frank Lloyd Wright at Taliesin in the fall of 1934, and Wright invited the senior Kaufmanns to visit. By the middle of 1935, Wright was working on both an office interior for the senior Kaufmann (now owned by the Victoria and Albert Museum, London) to be located in the department store and a new weekend retreat for the family at their Bear Run property.

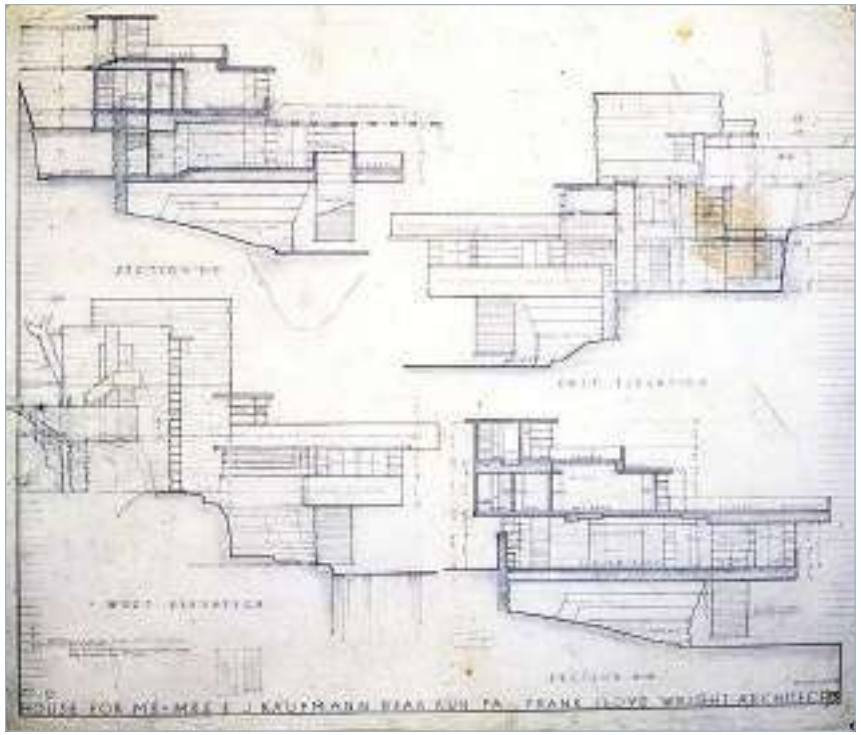
The main house was largely complete by the end of 1937 and a guesthouse was built further up the slope in 1939. The Kaufmanns used the house regularly until their deaths in the 1950s. Edgar Kaufmann, jr. inherited the house and used it as a weekend retreat until 1963, when he announced that he would entrust the house and its land to the Western Pennsylvania Conservancy of Pittsburgh for public education and appreciation. The Conservancy opened the house for tours in 1964. Kaufmann, jr. was instrumental in guiding its transition to a museum and continued to serve as an advisor to the staff until his death in 1989.

The only major physical alteration to Wright's original plan was the 1946 addition of a small servants' sitting area behind the kitchen, an addition overseen by Edgar Kaufmann, jr. after consulting with Wright. Another change occurred in 1954 after debris from a significant flood damaged the stairs to the stream. Again, Kaufmann, jr., oversaw the rebuilding of the stairs with the addition of stronger steel end posts tied into the stream's bedrock. In 1976 the carport beneath the servants' quarters was converted to a theater. All the work was undertaken in such a way so as not to affect the historic structure and to be completely reversible.

In 1989, the window glass was changed from 0.635cm plate glass to ultraviolet (UV) filtering laminated glass of the same dimension to protect the interior wood casework and furnishings, which though conserved only two years earlier, were once again showing signs of damage from ultraviolet rays.

Deflection of the cantilevers plagued Fallingwater since its construction and ultimately resulted in significant structural repairs. Edgar Kaufmann, Sr., had the building surveyed annually beginning in 1938 because he was concerned over the cracks on the master terrace parapets and deflections on both the first and second floor cantilevers. In 1950, the cantilevered guest terrace roof failed and had to be removed and rebuilt. After the senior Kaufmann's death, his son discontinued monitoring the deflection. He had faith in Wright's claims that the sagging in the cantilevers was a result of too much unauthorized structural steel having been added to the main floor cantilever during construction and was confident that the cantilevers had stabilized. However, in 1994, engineering student John Paul Huguley, using newly available computer technology, undertook an analysis of the master terrace cantilever and determined that the cantilevers were overstressed and probably had been so from the beginning.

The New York-based engineering firm Robert Silman Associates was brought in to undertake additional studies and to address the structural problems. A public forum was held to review the recommendations and an international panel of architects, historians, preservationists and structural engineers endorsed Silman's recommendations for strengthening the first floor cantilevers through post-tensioning of the reinforced concrete beams and strengthening of both the master terrace and Edgar Kaufmann, Sr.'s terrace by carbon fiber reinforcement. This work was completed in 2002.



Fallingwater, presentation drawing showing west elevation (upper left), main floor plan (lower right), second floor plan (upper right), and south elevation (lower right).

The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3602.157.

Fallingwater, view showing construction, facing north, circa 1936.

Photograph courtesy of Fallingwater and the Western Pennsylvania Conservancy, 2014.1.23.

In 2012, two cracks reopened on the master terrace and a new crack appeared along the top of one of the reinforced concrete bolsters supporting the house. A structural monitoring program has been implemented under the direction of Robert Silman Associates to determine the cause of the cracking. At the end of September 2014, following one year of monitoring, data indicated cantilever movement of less than 0.0254mm.

Some changes have been made to the site's entrance on State Route 381 to accommodate visitors. The original driveway, while still intact, is normally closed. A new entry road and gatehouse have been added to the south. The road leads to a recently redesigned parking lot that is encircled by trees. Visitors walk from the parking lot on footpaths to the visitors' center (added in 1980) with a central information desk, a museum store, café, both permanent and temporary exhibit areas, and restrooms. Tours of the house leave from the visitors' center, and, in keeping with Edgar Kaufmann, jr.'s wishes, all of these facilities are set far enough away from Fallingwater so that they are not visible from it. All of these new features are within the proposed buffer zone.

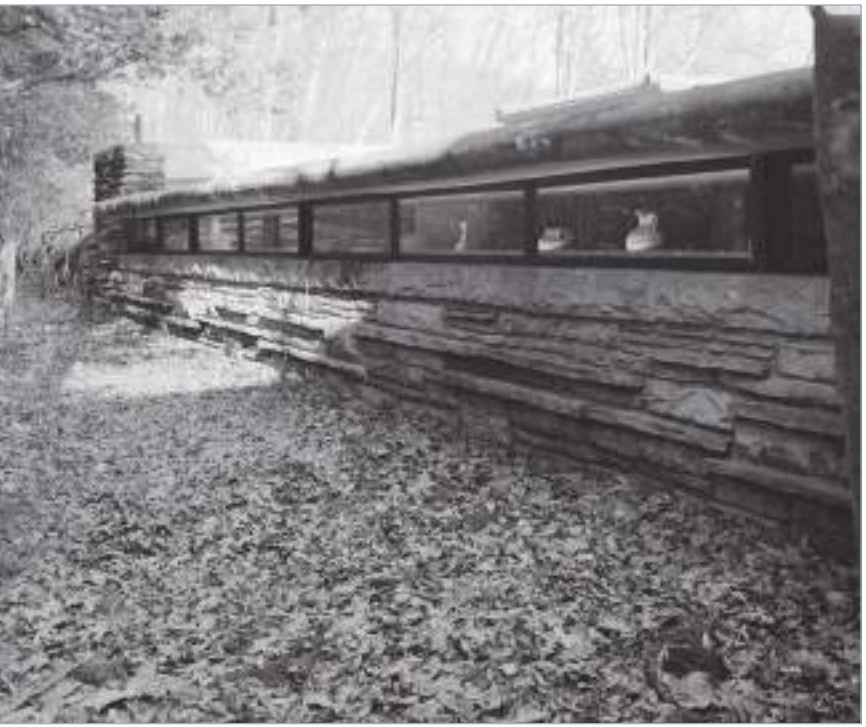
Fallingwater, view of living area during construction looking southwest, circa 1936.
Photograph courtesy of Fallingwater and the Western Pennsylvania Conservancy, 2014.1.31.

Fallingwater, view of trellis beams over main entrance to house, 1985.
Photograph by Jack E. Boucher, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS PA,26-OHPY.V,1–22.

Fallingwater, view during construction looking northwest, circa 1936.
Photograph courtesy of Fallingwater and the Western Pennsylvania Conservancy, 2014.1.28.

Fallingwater, view from north end of bridge of east terraces, 1985.
Photograph by Jack E. Boucher, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS PA,26-OHPY.V,1–19.

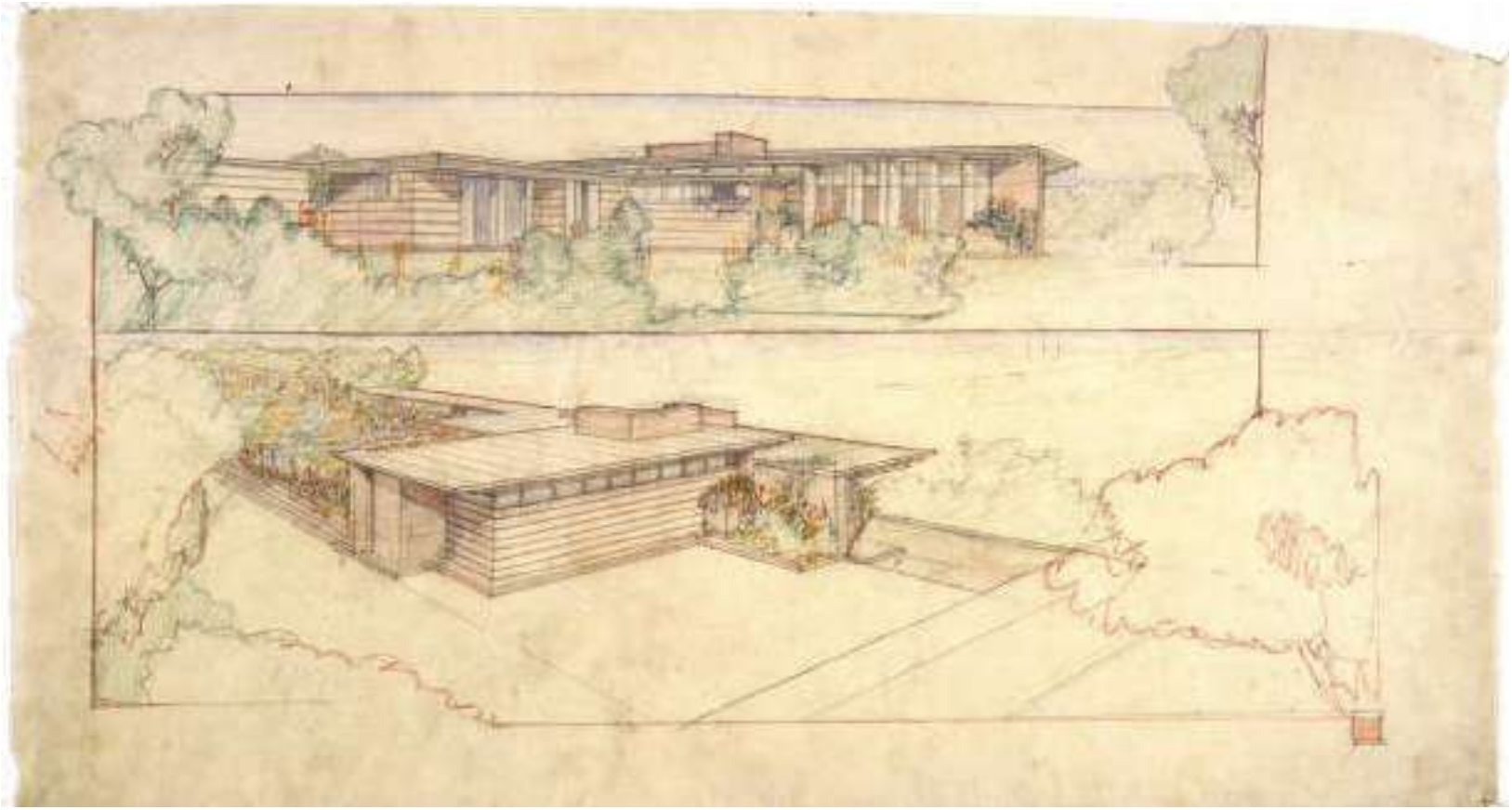
Fallingwater, view of kitchen looking south, 1985.
Photograph by Jack E. Boucher, Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS PA,26-OHPY.V,1–56.



Fallingwater, view of north elevation of guest house, 1985.
Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS PA,26-OHPY.V,1A–4.

Fallingwater, view of canopy stair looking northeast, 1985.
Library of Congress, Prints and Photographs Division, Historic American Buildings Survey, Reproduction number HABS PA,26-OHPY.V,1A–2.

2.b: HERBERT AND KATHERINE JACOBS HOUSE MADISON, WISCONSIN



Herbert and Katherine Jacobs House, presentation drawing showing courtyard view (top) and street view (bottom).
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3702.001.

HERBERT AND KATHERINE JACOBS, a newly married couple, contacted Wright in 1936 and inquired about a house for a family of ordinary means. They had purchased a lot in the Westmoreland subdivision, then just west of Madison, and had a budget of US$5,000. (The area was annexed to the city in 1948.) Wright accepted the challenge with its special requirements. The lot the Jacobses had acquired was too small for Wright's design, so rather than ask Wright to change it they bought two lots across the street that offered a better setting for the house. Under the direction of contractor P. Bert Grove, construction began the following spring. Wright designed shelves and cabinets for the house. Wright also approved Katherine's design for the dropped ceiling light fixtures above the dining table. Among further additions proposed by Wright was a glossy ceiling of pine boards and redwood battens he designed for the entire house which was subsequently built and installed by Herbert and Katherine Jacobs.

The Jacobs family, with their two children, lived in the house for five years until 1942. The house subsequently passed through a series of owners, until the present owner, James Dennis, purchased it in 1982 and began its preservation. From 1942 to 1982, the house received little maintenance.

Dennis engaged John Eifler, a noted Chicago preservation architect, and Bradley Lynch, from a Chicago architectural firm to serve as the project manager. Under their professional guidance, James Dennis and his sons undertook the extensive and painstaking project of preserving the Jacobs House. The preservation work took many years and included significant projects. The carport, a daring cantilever and defining feature of the house, had deflected significantly in the time since its construction. Its poor condition and failing foundations required its reconstruction, including the installation of new supporting piers.

An important design feature of the house is its flat and noticeably thin roof. Many added layers of asphalt had caused deflections. When removing the asphalt, it was discovered that the roof framing members had never been properly fastened to each other. To correct the problem, steel plates were installed to strengthen the joints. At the same time, the innovative ventilation system within the roof was slightly modified to allow for the inclusion of thermal insulation. Finally, a lighter membrane roof was installed.

Similar over-stressed conditions were found throughout the main structural system. The corners of the house were not holding true though Wright's plans called for 10cm by 30cm redwood for joists, the builders, rather than following the specifications, changed the beams and eliminated the diagonal braces at the corners. New bracing installed at the corners of the house corrected these problems.

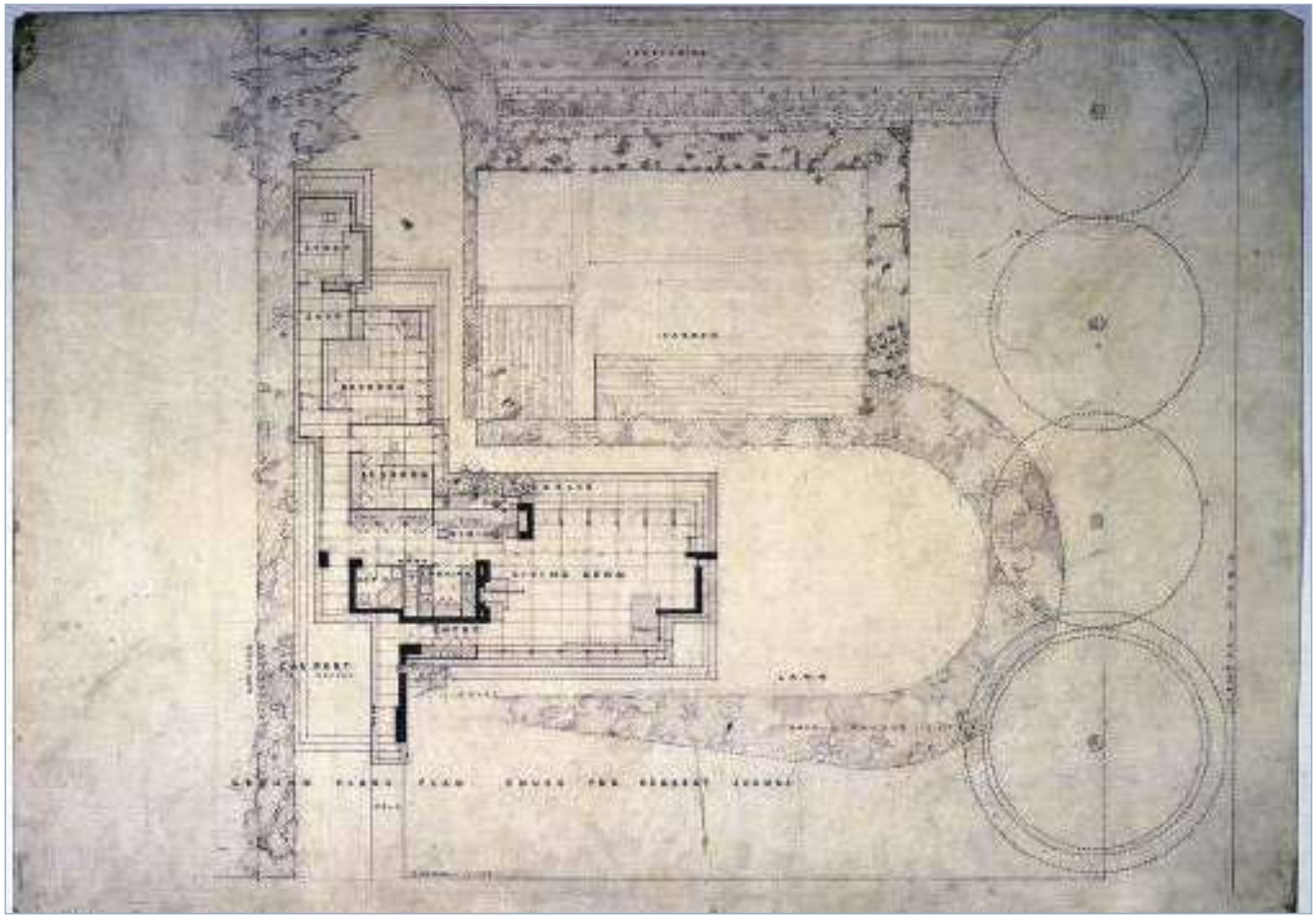
The radiant heating system within the concrete slab was found to be beyond repair. In order to restore this important feature, the old slab was demolished and a new slab 1.2cm higher than the outdoor slab was installed. A more efficient and effective radiant heating system was achieved by adding a moisture barrier and insulation panels under the new interior concrete slab. Polybutylene tubing was used to replace the iron pipes, which had deteriorated beyond repair.

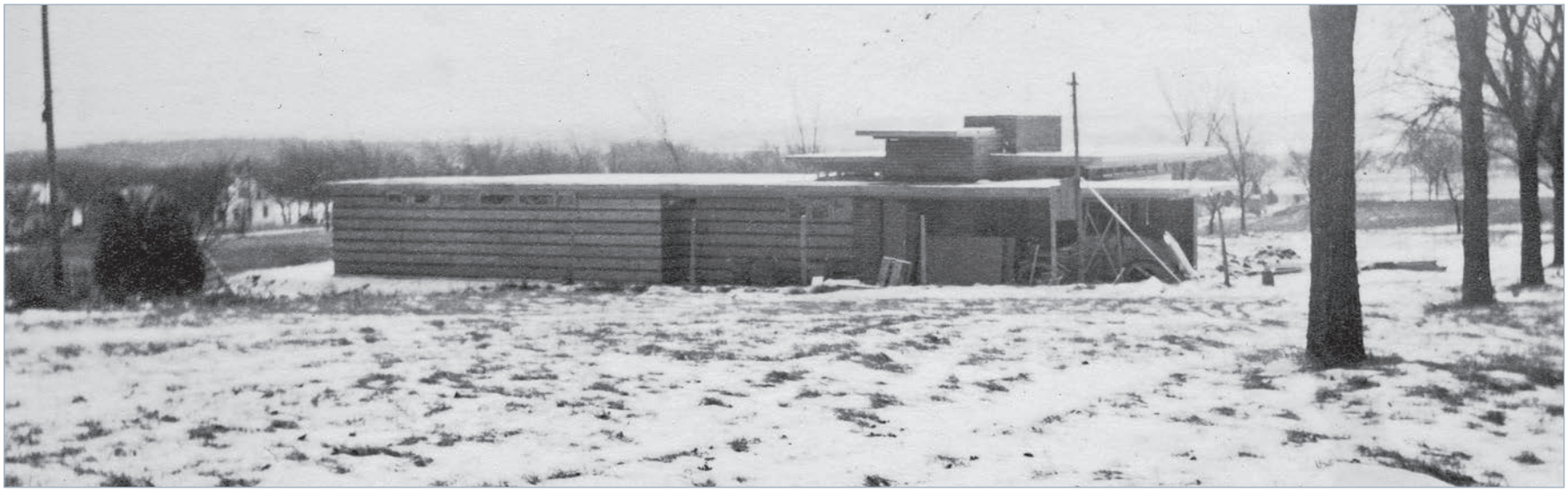
As a result of standing water on the foundation pad, the exterior door bottoms showed rot. Conservation of the doors and jambs included new supports using steel T-supports and Douglas fir. The bank of window-doors in the living room were so severely decayed that they were carefully replicated.

Conservation of the exterior Ponderosa pine boards and redwood battens included removal of a creosote preservative introduced sometime during the 1950s. Lastly, the Wright-designed corner flower box was reconstructed and attached where the carport piers meet the front wall of the house.

A comprehensive program of regular cyclical maintenance begun in the 1980s has kept the Jacobs House in very good condition. The house is open intermittently for public tours.

Herbert and Katherine Jacobs House, ground floor plan.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3702.005.





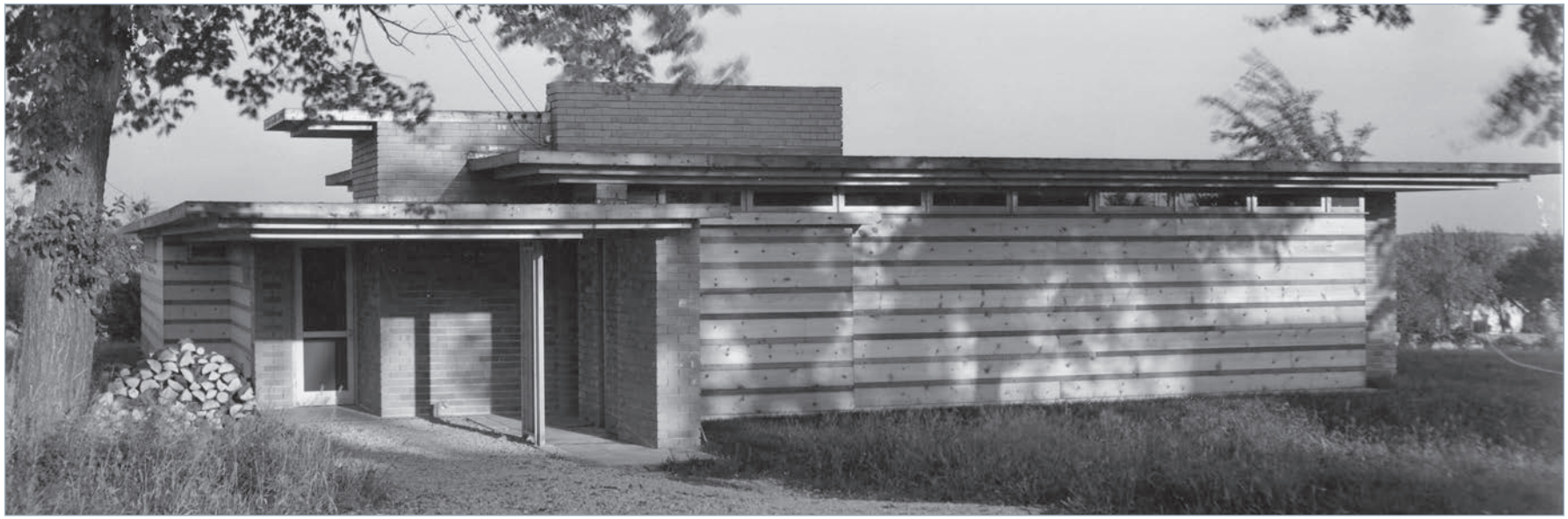
Herbert and Katherine Jacobs House, view of south and west elevations of garden looking south, circa 1937.
Photograph by John H. Howe, courtesy of the Wisconsin Historical Society, WHS-25609.

Herbert and Katherine Jacobs House, view of southwest elevation, circa 1935.
Photograph by John H. Howe, courtesy of the Wisconsin Historical Society, WHS-25625.

Herbert and Katherine Jacobs House, view of south and east elevations of garden looking northeast, circa 1937.
Photograph by John H. Howe, courtesy of the Wisconsin Historical Society, WHS-25627.

Herbert and Katherine Jacobs House, view of street elevation looking northeast, circa 1937.
Photograph by John H. Howe, courtesy of the Wisconsin Historical Society, WHS-25609.

(Right) Herbert and Katherine Jacobs House, view looking west showing living room terrace doors (left), and board-and-batten siding treatment (right).
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3702.0025.

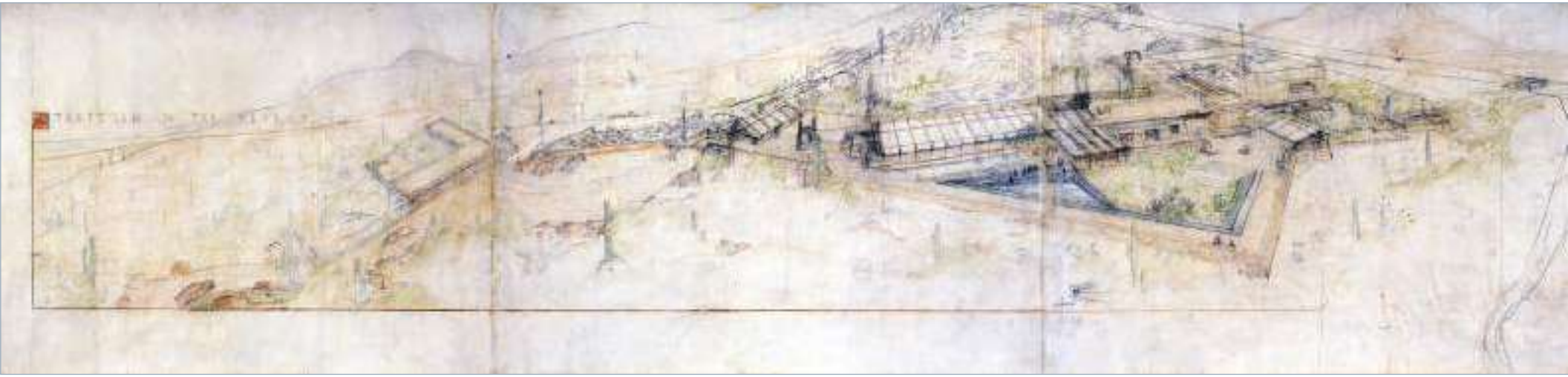


Herbert and Katherine Jacobs House, view looking east showing street view prior to completion of carport.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3702.0024.

Herbert and Katherine Jacobs House, view looking north from garden through full-height glass doors of master bedroom.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3702.0004.

Herbert and Katherine Jacobs House, view looking northeast showing living room fireplace (left) and dining area (center).
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3702.0002.

2.b: TALIESIN WEST SCOTTSDALE, ARIZONA



Taliesin West, aerial presentation drawing.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.003.

THE BUILDING OF TALIESIN WEST, which occupied the last twenty years of Frank Lloyd Wright's life, was a complementary enterprise to the constant construction activities at Taliesin. In the structures of Taliesin West, built under Wright's direct supervision, the architect explored new construction techniques and design concepts and experimented with new materials—all specific to the desert context—which he later used in designs for clients.

Wright's first encounter with the Arizona desert was in the late 1920s, when he consulted on the design for the Arizona Biltmore Hotel in Phoenix. After recovering from a serious bout of pneumonia in 1936, Wright was advised that he should spend winters away from the cold, damp climate of Wisconsin. Arizona proved the perfect antidote.

During the winter of 1938, the Taliesin Fellowship established a camp on land Wright had purchased in the desert several kilometers outside what has become the booming city of Scottsdale. Between 1938 and 1942, Wright and his apprentices started to construct more permanent structures. They began by building wood forms and using local rock along with rough concrete to create what Wright termed "desert masonry" walls. Built-up wood joists were erected from the walls to serve as frames for canvas roofs. A lawn was planted, a pool installed, and boulders with native petroglyphs found on the land were moved to strategic locations.

After World War II, work was carried out to give the property a more permanent character and additional buildings were constructed. The Sun Cottage, the original Wright family quarters, was rebuilt in 1946-47 as a residence for their daughter. When power transmission lines were installed down the slope and within view of Taliesin West, Wright reoriented the view from the original living room and expanded it into what is now called the Garden Room. A new cinema, housed in the Cabaret, was completed in 1951 and the Music Pavilion was built between 1955 and 1957 to house an expanded program of music, dance, and drama.

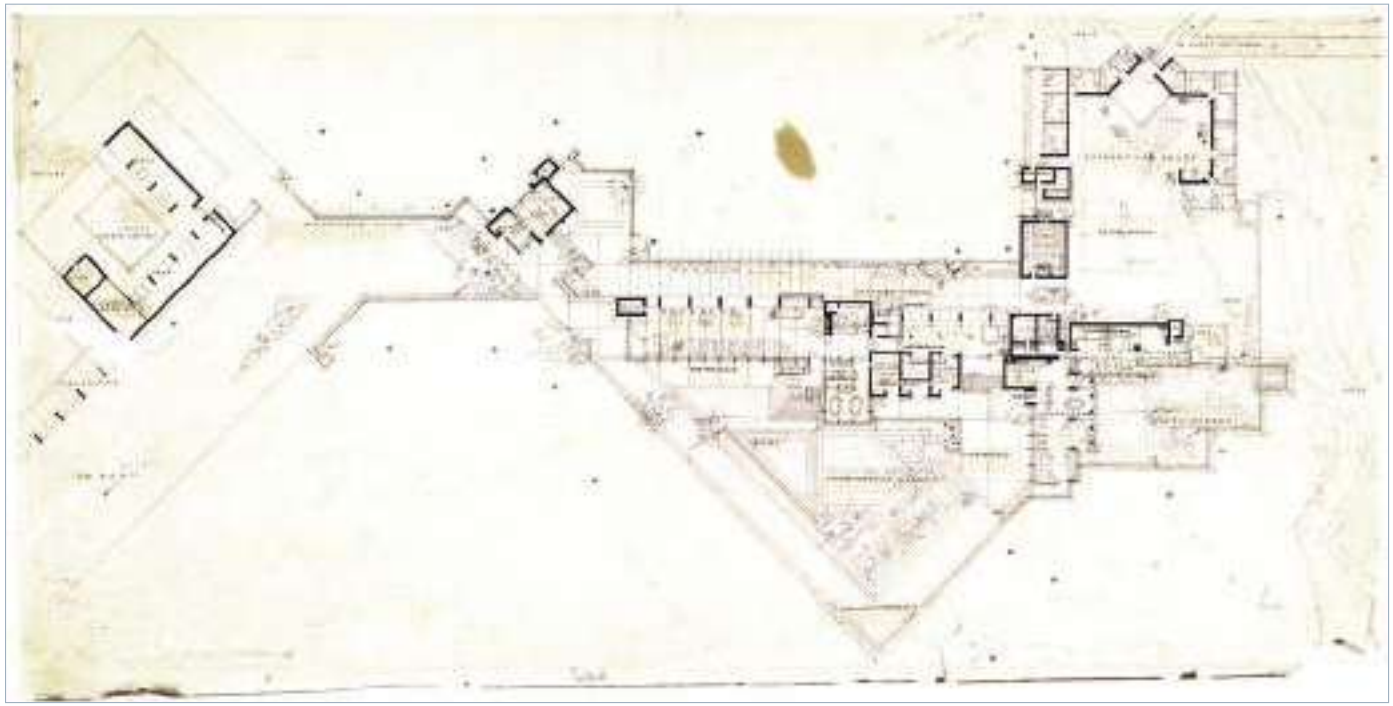
Each winter upon his return from Wisconsin, Wright would see Taliesin West with new eyes and direct apprentices to make changes to the building. Before his death in 1959, Wright told his wife, "What I have built here is but a thumbnail sketch; it is up to you to complete it."

Thus, following his death, Olgivanna Lloyd Wright and Taliesin Associated Architects (the Fellowship) continued to make changes, though most were system upgrades, to make the complex more suitable for year-round use. Damaging ultraviolet light from the sun has always been an issue at Taliesin West, over time seriously compromising the complex's wood structure. Thus a number of subsequent repairs have replaced wood components with steel: the roofs of the Music Pavilion and Apprentice Court following fires in the 1960s; and the kitchen guest deck, dining room, and bell tower into the 1970s. Other changes to the Music Pavilion included the addition of rooms adjacent to the Pavilion's stage for storage, a music room, and the archives and offices of the William Wesley Peters Memorial Library. Other repairs to the Apprentice Court followed Wright's original design using steel beams, roof supports, and translucent Fiberglas panels to replace canvas flaps and panels. At the same time, the rooms of the Apprentice Court were consolidated to create a series of small apartments.

Another change occurred in 1970 when Svetlana Alliluyeva, the daughter of Soviet leader Joseph Stalin, married apprentice William Wesley Peters. An open space adjacent to the Sunset Terrace was enclosed to create an apartment for the couple, work sensitively undertaken without negatively impacting either the form or aesthetic of the space.

Damaging ultraviolet light from the sun has always been an issue at Taliesin West, over time seriously compromising the complex's wood structure. To address this ongoing problem, in 1972 the wood structure of the kitchen, dining room and guest deck were replaced with steel.

A more concerted preservation of the complex began in 1998 when, concerned over the preservation condition of the translucent roofs, the Frank Lloyd Wright Foundation engaged preservation architects, Eifler and Associates Architects, Chicago (the same firm that advised on the Jacobs House), to prepare a conditions assessment and roofing plan. Following Eifler's recommendations, the



Taliesin West, ground floor plan.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.135.

drafting studio, office and living room's translucent Fiberglas roof panels installed in 1964 were replaced with composite panels of acrylic and canvas that are more sympathetic to Wright's original design intent. Eifler was then engaged to prepare a plan to restore the Wrights' private living quarters, which had been modified after Frank Lloyd Wright's death. After funds were secured, these spaces were restored in 2003 to their 1946 appearance. In 2014, the Foundation, on the advice of a qualified Preservation Oversight Committee, hired the preservation architecture firm Harboe Architects to develop a Taliesin West Preservation Master Plan, which was completed in 2015.

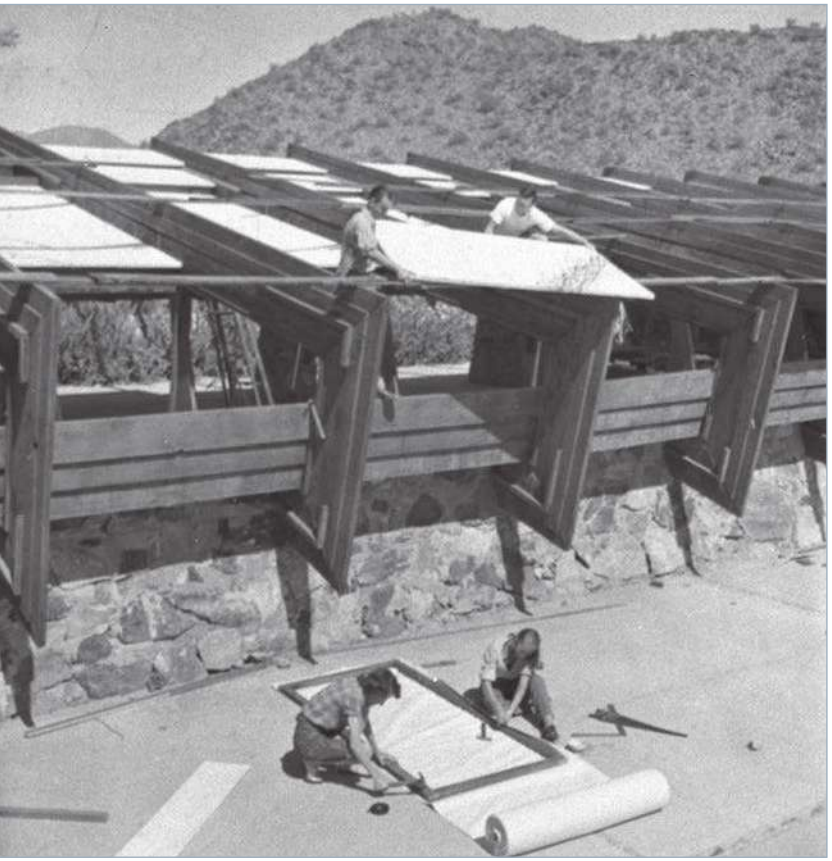
Taliesin West presently continues to house the offices of the Frank Lloyd Wright Foundation, the site's owner; the Taliesin Fellowship, the resident staff and apprentices who live and work at Taliesin and Taliesin West; and the School of Architecture at Taliesin, the education program for the Taliesin students. Taliesin West is open year-round for public tours.

Taliesin West, view of dining loggia with drafting studio beyond, 1939.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.3731.

Taliesin West, view of drafting studio, 1940.
Photograph by Larry Cuneo. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.0001.

Taliesin West, view of garden room, 1940.
Photograph by Peter Berndtson. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.0139.

Taliesin West, view looking southeast of pergola and drafting studio, 1942.
Photograph by Robert Carroll May. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.0861.



Taliesin West, view of drafting studio during canvas roof replacement, 1946.

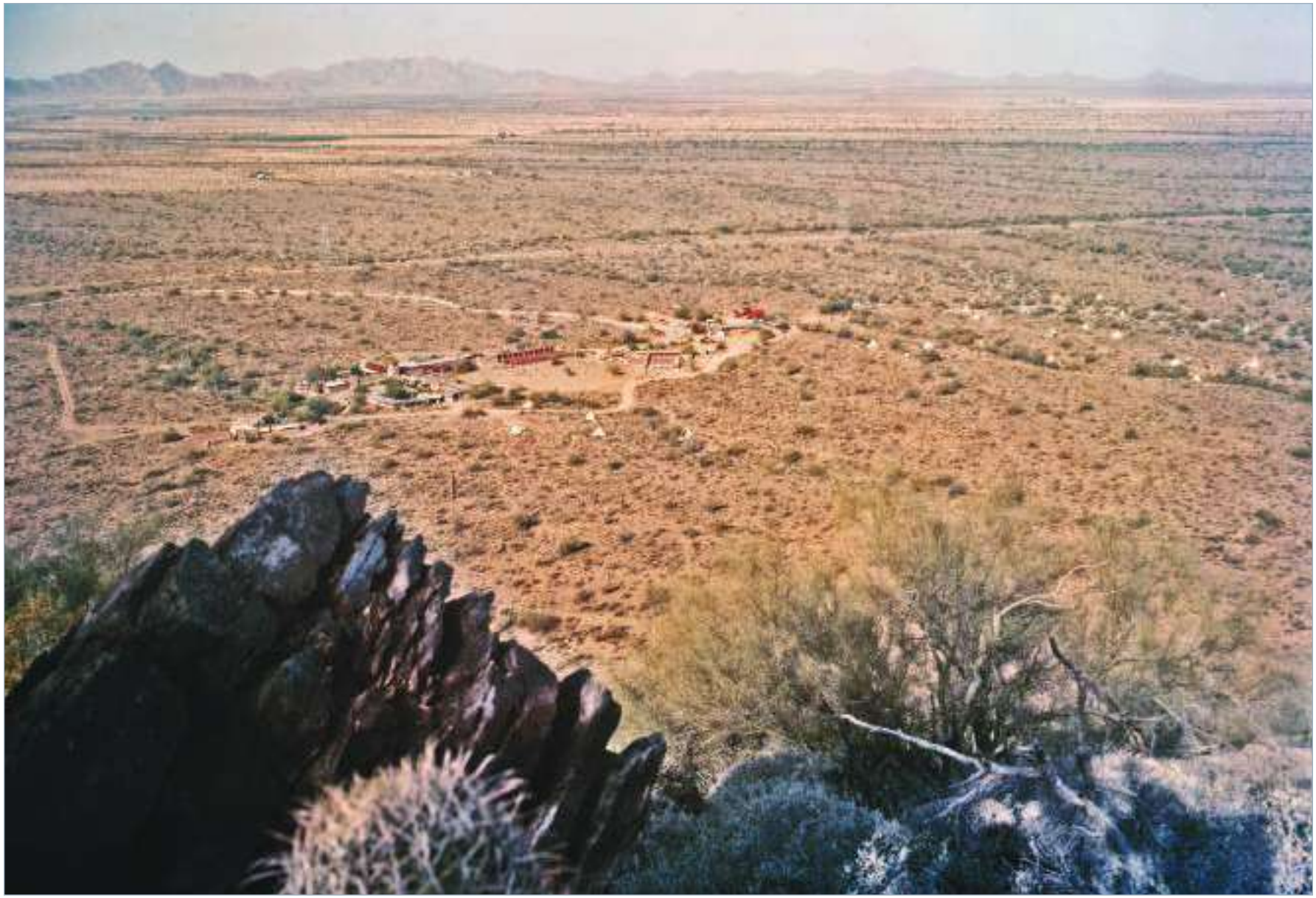
Photograph by Ralph Crane. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.0001.

Taliesin West, apprentices constructing cabaret theater, 1949.

The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 6510.0017.

Taliesin West, aerial photograph looking southeast, circa 1946, showing the "whirling arrow" design of road leading to the estate.
Photograph by Thaddeus Longstreth, courtesy of Richard W. Longstreth.

Taliesin West, view of dining cove in the Wrights' private quarters, 1952.
Photograph by John Amarantides. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 3803.1441.



Taliesin West, aerial photograph looking northwest, 1956.
Photograph by Allen Lape Davison. The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 0611.003.

2.b: SOLOMON R. GUGGENHEIM MUSEUM NEW YORK, NEW YORK

Solomon R. Guggenheim Museum, perspective drawing of west elevation.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 4305.017.

WHILE THE SOLOMON R. GUGGENHEIM Museum has undergone some modifications to further its program, including an addition, it nonetheless remains an internationally recognized icon of modern architecture that follows Wright's design as it was at completion in 1959.

Solomon R. Guggenheim was a member of a Swiss émigré family that achieved great wealth through mining interests. He married Irene Rothschild, and the two became art patrons and collectors. After meeting Hilla Rebay, a young German painter who had come to New York, they began to collect modern "non-objective" art with Rebay's advice. As their collection grew, Rebay encouraged them to think of building a permanent building to house it. In 1937, Guggenheim established the Solomon R. Guggenheim Foundation for the "promotion and encouragement of art and education in art and the enlightenment of the public."

Rebay began the search for an appropriate architect to design a Museum of Non-Objective Painting. Inspired by his theoretical writings and concepts of organic architecture, Rebay chose Frank Lloyd Wright in 1943 who began working on a ziggurat-like design that was made public in 1945. Guggenheim purchased a lot at Fifth Avenue and East Eighty-Ninth Street in 1944, but once World War II ended, high costs led the Foundation to postpone construction. In 1948 an abutting lot was purchased, which enabled Wright to design a building with a larger footprint. Unfortunately, the following year, Solomon Guggenheim died, and he was succeeded by his nephew Harry.

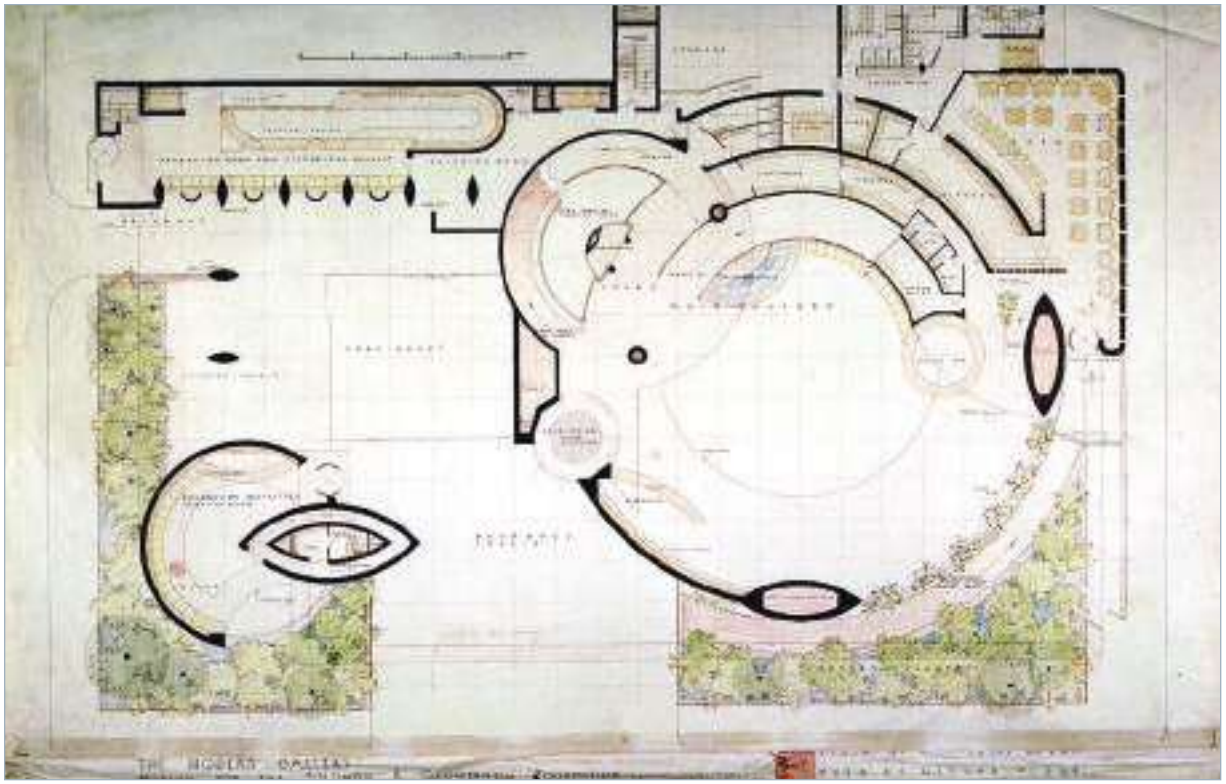
Harry Guggenheim vowed to proceed with the construction of the proposed new museum, which was to be named the Solomon R. Guggenheim Museum in his uncle's memory. As discussions with the client proceeded, Wright continued to modify the design in subtle ways. Construction plans were first presented to the New York Buildings Department in 1952, and after a protracted period of back and forth revisions, a building permit was finally issued in 1956.

It was then necessary to find a builder with the experience and knowledge needed to construct the unorthodox design. At the recommendation of Edgar Tafel, a former Taliesin apprentice, George N. Cohen was given the job. Construction began in October 1956. During the entire construction period, the museum gained major attention from the press and public. It opened in October 1959, several months after Wright's death, and during the museum's first nine months, 750,000 people visited.

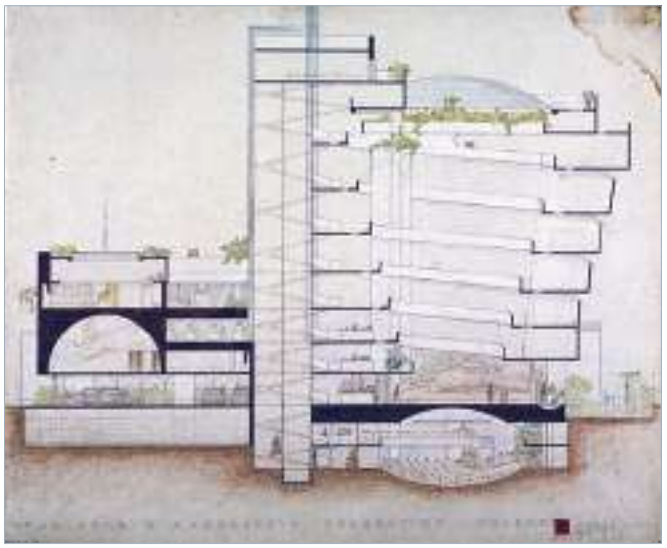
The museum has undergone a number of changes to accommodate the expanding collection and programs. The Thannhauser Gallery was opened in 1965 in the second-story monitor space. A four-story annex by Taliesin Associated Architects, loosely based on an unexecuted Wright design, was added at the northeast corner of the lot on East Eighty-Ninth Street between 1966 and 1968. However, when the museum proposed to rebuild and enlarge the annex in the 1980s, the idea was much more controversial. Eventually, a ten-story building designed by Gwathmey Siegel and Associates, set on the same footprint as the 1968 annex, was approved. The work began in 1988 and was completed in 1992. At the same time, some preservation work was completed on the interior, including the conservation of the original skylights over the dome and repainting of the gallery walls in the ivory color that Wright specified. The theater space was preserved in 1996 and the equipment upgraded. More space was added below ground, under the surrounding sidewalks, and largely concealed from street level to accommodate the museum's expanding educational programs.

In 2005, the museum began studying the building's exterior in an effort to understand what had caused cracks on the surface almost since the building opened. While in good structural condition, the building required the removal of eleven coats of paint, infilling of exterior cracks, treatment of corroded steel structures, and conservation and reinforcement of the concrete. During the process a decision was made to maintain the muted pale gray color long associated with the museum rather than to paint it the buff color originally chosen by Wright. Structural monitors were installed all around the building to measure subtle movements.

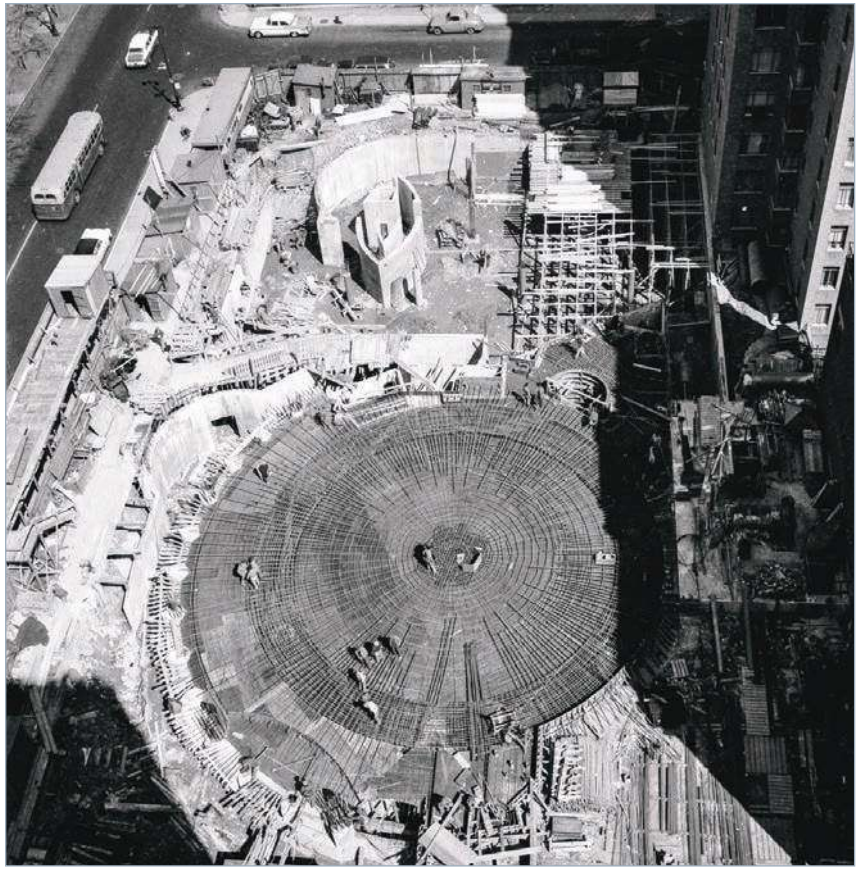
The Solomon R. Guggenheim Museum continues to serve its original function as an art museum.



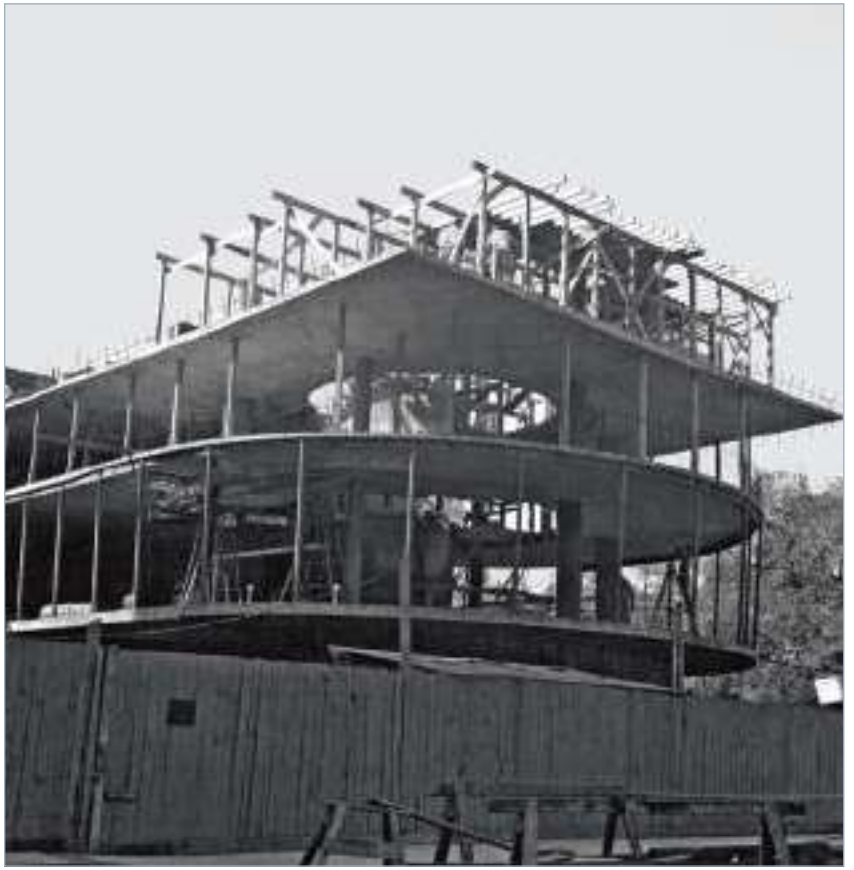
Solomon R. Guggenheim Museum, ground floor plan.
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 4305.049.



Solomon R. Guggenheim Museum, section drawing through monitor (left) and main gallery (right).
The Frank Lloyd Wright Foundation Archives (The Museum of Modern Art | Avery Architectural and Fine Arts Library, Columbia University, New York), 4305.026.



Solomon R. Guggenheim Museum, view of construction of lower level, 1956.
Photograph by William Short. Courtesy of the Solomon R. Guggenheim Foundation.



Solomon R. Guggenheim Museum, construction of the Monitor Building, ca 1958.
Photograph by William Short. Courtesy of the Solomon R. Guggenheim Foundation.

Solomon R. Guggenheim Museum, view looking northeast, ca. 1957 - 1958.
Photograph by William Short. Courtesy of the Solomon R. Guggenheim Foundation.

Solomon R. Guggenheim Museum, view of installation of skylight glass, ca. 1956 - 1957.
Photograph by William Short. Courtesy of the Solomon R. Guggenheim Foundation.

Solomon R. Guggenheim Museum, view of west elevation, ca. 1959.
Photograph courtesy of the Solomon R. Guggenheim Foundation.

Solomon R. Guggenheim Museum, view of office workers in the monitor building, as seen form the second floor, circa 1959.
Photograph courtesy of the Solomon R. Guggenheim Foundation.

Solomon R. Guggenheim Museum, visitors on the ramps of the main gallery, 1959.
Photograph courtesy of the Solomon R. Guggenheim Foundation.

"The work of this great master revealed an architectural world of unexpected force and clarity of language, and also a disconcerting richness of form. Here finally was a master-builder drawing upon the veritable fountainhead of architecture, who with true originality lifted his architectural creations into the light. Here again, at last, genuine organic architecture flowered."

Ludwig Mies van der Rohe

SECTION 3

JUSTIFICATION

3: JUSTIFICATION FOR INSCRIPTION

Introduction

By Richard Longstreth
Professor of American Studies, Emeritus, George Washington University
Fellow, Society of Architectural Historians

The 20th-Century Architecture of Frank Lloyd Wright entails eight properties that have figured prominently in shaping the course of architecture. This series played a definitive role in the development and evolution of Modern architecture during the first half of the twentieth century and continuing to the present. The Outstanding Universal Value of the series is manifested in three attributes. First, it represents a new conceptual approach to the development of form and space, where interior and exterior aspects are closely related spatially, experientially, and often structurally, with the interior arrangement being the primary generating factor. Interior space is manipulated in dynamic and complex ways to a degree seldom matched in the architecture of any era or place. Spatial continuity is expressed through open plans and transitions between indoors and out that blur the distinction between the two. Dynamic forms are achieved through innovative uses of structure and materials. These factors combine to create a richness of experience through contrast—compression and release, light and dark, rough and smooth, refuge and prospect—as well as carefully composed paths of movement that foster a deeper understanding of place.

Second, the design of the buildings in this series is fundamentally rooted in nature's forms and principles such as growth, suitability to location, and unity—in the way the parts relate to the whole. This work breaks new ground in the ways architecture could be related to the natural environment. Rural examples engage in spirited dialogues with the site (Taliesin, Fallingwater, Taliesin West). Herbert and Katherine Jacobs House, the suburban example, utilizes the site to create its own natural setting. Urban examples, on the other hand, either become detached viewing platforms for their environs (Frederick C. Robie House, Hollyhock House) or are inward-oriented sanctuaries (Unity Temple, Solomon R. Guggenheim Museum). Irrespective, their architectural language is one of geometric abstraction inspired by nature's forms. The inherent properties of structural systems and/or materials provide the basis for expression. These designs are wholly unified—in form, space, detail, materials, structure, and, often, furnishings.

Third, the series represents an architecture conceived to be responsive to the evolving American experience. This work vigorously embraces the new—new technology, new kinds of space, new uses of materials, new modes of living. Later work responds to an increasing casualness in domestic life—indoors and out—and reliance on the automobile for routine transportation. But the radical departures from conventional and even avant-garde designs are deeply rooted in traditional values of dwelling and community. The degree to which they draw from traditional practices of an unusually wide spectrum is matched by the extent to which those various traditions—non-Western and Western—are synthesized and transformed into an architecture that seems to have no precedent. Many of these buildings are infused with structural innovations and all manifest an unusual sensitivity to the expression of materials. Their roots in nature are coupled with their focus on the individual, and individuality, rather than on the collective. They embody what was an unceasing pursuit of new architectural environments—public and private—to address contemporary human needs. Their longstanding international fame is more than justified by the intrinsic qualities that give this series such distinction in these varied respects.

The work that comprises *The 20th-Century Architecture of Frank Lloyd Wright* possesses a brilliant originality, a seemingly limitless capacity for invention that has been an underlying objective of Modern architecture since the turn of the twentieth century. It also embodies the multi-faceted and continually evolving complexion of Modern architecture over the span of more than fifty years, a period when this movement in design seemed boundless in its capacity to pursue new conceptual parameters.

Modern architecture was predicated on broad principles anchored in a search for form, expression, and meaning that was considered appropriate to serve the contemporary world. Part of that agenda entailed the rejection of overt references to the past, differentiating this approach to design from the various strains of eclecticism that had characterized Western architecture since the turn of the nineteenth century and from the classical tradition that had a

considerably longer legacy. Modern architecture could, and often did, entail oblique ties to the past, as many of its practitioners admired earlier, generally pre-industrial and often vernacular, traditions of both East and West. But the language of Modern architecture was one of abstraction. "Honesty" in the Ruskinian sense was no less important. Materials should express their inherent properties. At the same time, the structural "honesty" propagated by E. E. Viollet-le-Duc in the mid-nineteenth century was also embraced; materials and the structural systems they comprised should be frankly expressed and could often serve as a basis for expression. Finally, form and structure should be predicated on function—utilitarian and symbolic. To accommodate contemporary needs, proponents believed, planning should be free from conventional patterns; openness and flexibility should replace the supposed strictures of symmetry and enclosure. New conceptions of form, structure, materials, and space could all serve this function-driven program to create an architecture that was ostensibly more responsive to society and indeed manifest society's ideals and aspirations as well as its basic requirements.

From an historical perspective, scholars have long understood that Modern architecture has comprised numerous strains—a fact reflected in the profusion of literature that continues to be issued on aspects of the phenomenon globally. This diversity encompassed more than varied forms of personal expression; it entailed outlooks, methods, theoretical frameworks, and cultural concerns.

Within this broad phenomenon, the series embodies an approach that Frank Lloyd Wright called organic architecture, a term that remains in currency in the United States and in many other countries as well. In the context of this series, organic refers to design that in conception, in configuration, and in structure is premised an understanding of nature as the spiritual and creative foundation for architectural expression. In this approach the role of the architect is not to imitate nature directly, but rather to formulate a method of composition paralleling that of nature, translating the processes of life, growth, and development in abstract form to develop a unified totality in design.

Throughout his career Wright studied, or at least observed, many traditions and current tendencies in architecture and thought. The picturesque tradition, an important thrust in the United States beginning in the 1840s had a major impact. So did academic classicism as advanced by proponents of the École des Beaux-Arts. Japanese prints and traditional Japanese architecture were an inspiration throughout his career. American transcendentalism of the nineteenth century, monumental buildings of ancient Central America, and the hillside architecture of Renaissance Italy were among the other historical sources from which he gained inspiration. The Arts and Crafts Movement in the United States and the United Kingdom, as well as continental Art Nouveau and its various permutations affected his outlook, as did the tall commercial buildings of his mentor, Louis Sullivan. Later he took account of Art Deco and the International Style. These and many other sources make *The 20th-Century Architecture of Frank Lloyd Wright* far more wide-ranging in its content than the work of most other twentieth-century architects worldwide. Yet the process of appropriation was never derivative and the results never a pastiche. On the contrary, the design approach they represent was one of synthesis, whereby whatever sources may have provided inspiration are fully absorbed into a new framework, contributing to a design that is wholly, often radically new. These buildings pushed the envelope of what constitutes Modern architecture. In various ways they are rooted in tradition; however, the design process by which they were created was one that stripped away traditional forms to get to the essence of the ideas that lay behind those traditions and develop that essence in a contemporary framework.

This series constitutes a major transect in the history of Modern architecture between 1900 and 1960. The two oldest properties are extraordinary embodiments of avant-garde modernism at its inception and subsequent examples are primary exhibits of some of the many, evolving facets of a movement that was (and remains) relentlessly experimental in the development of form, space, and structure, in the use of materials, and in a number of cases in redefining building programs to address contemporary human and functional needs.

The 20th-Century Architecture of Frank Lloyd Wright embodies the development of a new aesthetic in architecture and a new language in which to manifest it. The series reveals some of the extraordinary breadth of expression that could be found in Modern architecture during a period over fifty years. The series further embodies some of the boldest structural experiments of the era, ranging from the use of reinforced concrete to new systems comprised of wood. Work in this series contributes significantly to new approaches in the creation of sacred space, institutional space, and domestic space. The series entails important examples of the twentieth-century quest for creating substantively new environments that were intended to respond to the demands of modern life. The series exemplifies a consistency in approach that goes beyond functional concerns to embrace a fundamentally new approach to architectural design in all its myriad facets.

The oldest building in the series, Unity Temple in Oak Park, Illinois (1905),

is a premier example of architecture at the turn of the twentieth century that embodies a revolutionary approach to the development of form and space—one that constituted a radical break from long standing Western notions of enclosure as well as from conventions of religious architecture. That approach broke even from then-current European modernist practices (e.g., Art Nouveau) in rejecting the notion of architecture as walls penetrated by discrete openings (doors, windows) to an abstract ordering of form that defined, but never fully encompassed space, allowing an interpenetration of interior and exterior spaces and of interior spaces among themselves. Here, the lobby opens to terraces on its two long sides and onto the Unity House on a third side, while the worship space is encased by walls save at the uppermost level, where transom windows extend along most of the perimeter. Paths of circulation from the exterior into the lobby, thence to the worship space are not only circuitous, but filled with contrasting experiences of compression and expansion over multiple levels.

Unlike most houses of worship, the full impact of the principal space only becomes apparent after this lengthy, complex spatial progression. The configuration of that space is rooted in the tradition of Protestant meeting houses, where seating extends around three sides of a more-or-less cubical volume. Yet reaching that space at Unity Temple and experiencing it once there are far removed from any historical precedent. The underlying abstract geometry of the plan is dramatized by the prolific use of ornamental embellishment that is an integral component of the underlying order, not a decorative departure from it. Throughout, the idea of gesamtkunstwerk is embodied through fixtures, windows, and other interior components—all architectonic in character rather than being applied decoration in any traditional sense. Thus Unity Temple breaks from the norm for houses of worship in the United States not only in its rejection of prevalent medieval and classical models, but also in the way space is formed, in its spatial progression, and in the nature of its embellishment.

Unity Temple is also a departure from the norm in its use of monolithic reinforced concrete (that is, concrete poured to form walls, not a skeletal frame)—a structural technique then employed in the United States primarily for industrial structures such as grain elevators and manufacturing plants, not for civic or institutional buildings. The massive walls facilitated by this use of concrete, combined with a symmetrical composition and hierarchical massing, give the exterior a monumental quality that makes it seem substantially larger than its actual size. The massing vaguely suggests that of some ancient temple of indeterminate origins, but nothing about its appearance is indicative of historic precedent or contemporary practice for houses of worship. Likewise the axiality of the composition is drawn from Beaux-Arts practices, but this order is defied by the circuitous movement necessary to reach most parts of the interior.

The abstract rigor of Unity Temple's massing, spaces, and details, as well as the power of its concrete structure was orchestrated to provide a place that was a welcoming sanctuary for members of its congregation. The worship space's configuration underscores the importance of church as an organized community. When seated, congregants are bound to one another visually—more so than in most traditional cruciform or square plans, but congregants also are formally placed, mostly in tiers around the central space. On the other hand, the expansive lobby as well as the principal room in the Sunday School are conducive to more casual interactions. All these spaces were tailored to the principles of Unitarianism, which Wright knew well from his own family, and especially from his uncle, Jenkin Lloyd Jones, for whom he had designed a house of worship earlier. At Unity Temple, Wright's own parish, he sought to provide a new kind of setting that manifested the traditional values of this denomination.

Finally, Unity Temple breaks from convention in its relationship to the environs. While most worship spaces, irrespective of period, are inward looking, their portals engage with the landscape (urban or rural) around them. Unity Temple's main block squares off with the principal street it faces and enunciates its corner site; however, the two entrances are inconspicuously recessed well back from that main street. Urbanistically, then, the design suggests a fortress as much as a house of worship. This rejection of place—a thoroughfare that served (and still serves) as a major east-west route from Chicago to outlying residential communities, with the commercial center of Oak Park nearby and an array of institutional and commercial buildings in proximity—was intended to exclude an environment deemed undesirable. This approach to urban settings came to characterize many facets of Modern public and institutional buildings during the 1960s and 1970s. From Wright's perspective, it was shielding an interior environment created according to what he understood to be natural principles from an "unnatural", inharmonious setting.

The Frederick C. Robie House on the south side of Chicago, Illinois (1908), is the quintessential example of the Prairie house, Wright's term for a type he developed during the first decade of the twentieth century. That type was devised as an abstract embodiment of the comparatively flat landscape that predominated in Illinois and other parts of the central United States. For

domestic architecture the Robie House is no less revolutionary than Unity Temple in its use of form and space employing an abstract geometry based on natural forms. The Prairie house, indeed, was the primary instrument by which Wright developed this new approach to design. While Unity Temple is inward-looking, underscoring the sanctuary of worship space, in the Robie House the interplay between indoors and out is mitigated somewhat by raising the principal floor well above street level in order to provide a degree of privacy in an urban setting. The constraints of a long, narrow corner lot led to accentuating the house's geometric composition, with roofs boldly cantilevered (using embedded steel I-beams) and dramatically projecting sections of wall. Windows are set in long bands that wrap more-or-less continuously around the perimeter. Below, the base extends outward in a series of layers to offer a complex counterpoint. In contrast to the reserved monumentality of Unity Temple, the exterior of the Robie House possesses a dynamic, sculptural three-dimensionality that is unmatched in the work of other architects of the period or earlier anywhere on the globe. At once ground-hugging and gravity-defying, the composition is enriched by the use of Roman brick (a type revived in the United States during the late nineteenth century) articulated with limestone coping. Both underscore the building's pervasive horizontality, as does the use of mortar, which is recessed between courses and in the vertical joints is set flush with (and colored to match) the bricks. It is these materials and the ways in which they are arranged that provide visual stimulus. The exterior is bereft of applied ornament.

The Robie House also exemplifies a new approach to developing domestic space whereby the principal rooms are defined, but not fully enclosed by walls. Instead of a room comprising walls, with thresholds created for doors and openings for windows, those on the principal floor of the Robie House form a continuous space that is punctuated by a central fireplace, stairwell, and grilled screens. This openness also exists in the connection between indoors and out, with the window bands and French doors providing nearly uninterrupted views of the environs. As in Unity Temple, movement through space in the Robie House is circuitous, but here with a cave-like entrance near the rear of the building leading to a low, womb-like vestibule from which an open stairwell with three turns leads to the principal floor. Paralleling the contrast between indoors and out at Unity Temple, the principal spaces at the Robie House are elaborately articulated with wood trim on the walls and ceiling in rectilinear patterns that integrate both registers for the heating system and overhead light fixtures. Screens and built-in furniture in the dining room augment the effect of an exuberant and rich architectonic totality.

Especially through monographs published by Wasmuth in Germany and, later, by Wendingen in the Netherlands, Wright's new approach to designing architecture had a profound effect on avant-garde European modernism during the 1910s and 1920s, embodied early on in the work of Walter Gropius such as the Werkbund Exhibition pavilion (1913) and later in that of members of the De Stijl group and of Ludwig Mies van der Rohe and his Barcelona Pavilion (1929), among others. By the late 1920s the creation of an abstract architecture with spatial fluidity, indoors and out, would become a defining characteristic of avant-garde modernism in many parts of the world. Without such pioneering work as Unity Temple and the Robie House, twentieth-century Western architecture would have assumed a very different complexion.

Taliesin, outside Spring Green, Wisconsin (1911), is a consummate example of the transcendental longing for architecture to engage the pastoral landscape; to partake in a respectful dialogue with the site; to reaffirm human roots in nature. These qualities have characterized a basic cultural outlook in the United States that was substantially inspired by English Romantic literature and landscape design of the eighteenth and nineteenth centuries, and it was one that became shared in a number of other Western countries as well. While rendered in a vocabulary informed by earlier works such as Unity Temple and the Robie House, Taliesin accentuates form in a seemingly contradictory way—at once hugging the land and soaring above it to give the traditional Romantic impulse a wholly new, dynamic interchange with the hillside terrain. Taliesin is in fact one of the most original responses to steeply sloping topography created during the early decades of Modern architecture. In broad conception its response to the site is informed by hillside villas of the Italian Renaissance that Wright came to know firsthand while he was preparing the Wasmuth volumes at Fiesole, just outside Florence. The design also draws from traditional Japanese architecture by breaking down its sizable extent into domestically scaled pavilions so that the complex in its entirety can only be comprehended with movement around the premises.

Locally quarried limestone, minimally dressed and set in rough, horizontal bands, with many of the pieces projecting, is used extensively throughout Taliesin to underscore its ties with the land. The highly textural quality of this work is evocative of centuries-old masonry Wright would have seen in Italy, and its use here is contemporary with the rustic use of rubble stone for stylish country houses in both the United States and Britain. At the same time, the stone walls at Taliesin are treated as rugged planes, interspersed with stucco walls and window banks to form a complex, abstract composition. A duality also exists between their predominantly vertical forms and the emphatic

horizontality of the stonework. Finally the stone lends a sense of intimacy and retreat, both in the court around which the three arms of Taliesin extend and in the domestic spaces, where stone is used for massive fireplaces and to accentuate secluded recesses. At the same time, interior space connects to the outside in two ways. On one side, rooms and their terrace extensions become a series of panoramic viewing platforms of the rolling Wisconsin River Valley. On the other side, spaces are tied to an intimate, terraced garden and vistas up the slope before descending rapidly down to the farm. Through the dramatic play of form, space, and materials the house gives a new and thoroughly modern vigor to longstanding Romantic sensibilities.

Taliesin is further an especially ambitious example of combining an architect's work place with dwelling place, a practice that may well have been inspired by the houses of unusually successful artists such as Frederic Church. Other early examples in the United States were the house-offices of Frederick Law Olmsted (property purchased 1883) and Henry Hobson Richardson (property purchased 1874), both in suburban Boston, Massachusetts. Perhaps the most famous such compound before Taliesin was Eliel Saarinen's Hvittrask (1901-03) outside Helsinki, where the office area was fully integrated into the composition. Wright had already embraced this union when he added a studio-office to his residence in Oak Park in 1898, an appendage that contrasted with the house and demonstrated how far his design approach had developed over the preceding decade. At Taliesin, like Hvittrask, the office was wholly a part of the overall design. Finally, far more than other designers' residences of the late nineteenth and early twentieth centuries Taliesin became an experimental ground for new ideas, where additions and alterations to its fabric began soon after its initial completion in 1912 and continued until Wright death over four decades later.

Hollyhock House manifests with uncommon invention and lyricism the pronounced tendency toward regional expression and local identity that, during the interwar decades, was widespread in the United States and likewise pursued in other parts of the world. Here, in an unconventional turn, ancient Meso-American sources were tapped as a springboard for exterior expression, while a traditional Spanish patio is freshly interpreted as an anchor for the interior configuration. At the same time, the scheme's strong Beaux-Arts axiality and its multifaceted complexion seem to draw from Wright's seven-year experience of designing the Imperial Hotel in Tokyo, which extended to 1920, well after plans for Hollyhock House were completed. Like Taliesin, Hollyhock House's multiple parts make the design impossible to understand from any single vantage point; however, in other respects it is the antithesis of the Wisconsin house, set firmly at the top of a hill, massive, even monolithic, in appearance, as if were constructed of concrete, its exterior walls adorned in ornament. These seemingly disparate qualities are woven into a seamless whole and choreographed with a theatricality that met the very specific functional and decorative desires of its unconventional owner. Such theatricality was also emblematic of many works of the period across the globe—from the spirited exuberances of Art Deco to the scenographic escapism of historicizing movie palaces. Here, however, the treatment is more reserved and specific to its location, and the effect is more monumental.

Unlike Taliesin, which is wedded to the sloping hillside, Hollyhock House dominates its hilltop site. The large Olive Hill tract was located in a then sparsely developed residential area of East Hollywood. On all sides of the house, pergolas and terraces extend outward to provide sweeping views in some places, intimate vistas in others. Taliesin was built upon the cultivated landscape of dairy farms in south-central Wisconsin, but Hollyhock House followed an increasing practice in southern California, namely transforming a relatively barren, arid landscape into a lush one through irrigation. As Wright drew inspiration from Meso-American sources for the building itself, so he seems to have been inspired by the hillside Tuscan gardens he saw while residing at Fiesole. The monumental theatricality of the house was to be matched by lush vegetative theatricality of newly created landscape. No less than at Taliesin architecture and nature are set in an intimate dialogue.

Inside, Hollyhock House is organized for elegant entertaining and theatrical performances on a regular basis in a highly original way. Many of the spaces are organized with cross-axial discipline, tying them together volumetrically and perceptually. But while there are many avenues of continuity, the plan is not entirely an open one. The configuration allows for an unusual degree of flexibility in the use of space, pushing the boundaries of traditional domestic use. Taking advantage of the region's salubrious climate, the direct connections to outdoor terraces and courts are unusually extensive.

Fallingwater, in southwestern Pennsylvania (1935), is an extraordinary embodiment of the maturing of Modern architecture and of the tendency to broaden its scope of expression. The design in a sense is a rejoinder to the International Style and, more specifically, to Richard Neutra's spectacular Lovell House in Los Angeles (1927-29), which similarly pirouettes from a hillside site. Fallingwater's intense geometry of vertical and horizontal planes also likely owes a debt to the architectural exercises of the De Stijl group from the 1920s. But the Pennsylvania house has none of the machine aesthetic that permeated Neutra's work and that of many European colleagues of the period. Instead, its emphatic embrace of carefully chosen natural materials

and rugged textures offers a poetic response to the remote, wooded site along Bear Run. The materials and colors of the house echo those in their setting, each component of the design playing a part in the coherent composition.

Seemingly thrust into the hillside and at the same time perched over the creek, Fallingwater accentuates Taliesin's dramatic engagement with a sloping terrain, using cantilevered forms to create a three-dimensionality that was far more dramatic than most examples of Modern architecture at that time—taking the plastic qualities of the Robie House one step further. The building is, in effect, an enormous piece of sculpture that is emphasized by the arresting unity of materials, color and motifs used throughout. The house seems to be at the same time an outgrowth of the land and a striking counterpoint to it. The intensity of this play was rendered possible by a very bold use of reinforced concrete, stretching the limits of use for the material at that time. The projecting concrete slabs are further extended vertically as parapets—like the raised edges of a tray—to give added strength to the cantilevers, while augmenting the effect of horizontal planes floating above one another, and echoing the stone ledge that creates the waterfall. The effect of the whole is simultaneously an ethereal defiance of gravity and a remarkable expression of complementarity between the building and its setting. As at Taliesin, masonry walls, laid in rough horizontal courses, are integral to the structure, but at Fallingwater they are not so much interspersed as they are a visual anchor tied to the upward slope of the site. Approaching the house, the effect is dominated by the concrete cantilevers, but by the time one progresses a short distance to the main entrance the building appears to be mostly a series of vertical stone slabs.

Two of those planes frame the deeply recessed entrance that opens into a tight, low-ceilinged vestibule. Just beyond, the principal floor is comprised primarily of an expansive single space tailored to accommodate a variety of functions—one of the most open plans to be found in a residence of any size at that time. The dining area is framed by stone walls, the same as those seen on the exterior, including one with a massive fireplace, giving a sense of intimacy and seclusion. Gradually this space becomes more open until, at the far end, window bands and glazed swinging doors allow the wooded setting to be visually dominant. And to one side, a series of retracting glass panels enables descent to the stream below. The massive masonry piers and flagstone floor are rustic attributes that, until the 1930s, seemed antithetical to Modern architecture. Underscoring the roughness of the site, a great boulder on which the chimney rests erupts from the floor to form the fireplace hearth and further tie the house to its setting.

In contrast to the main floor, those above form an intricate web of circulation and private sleeping and reading areas—all within a limited footprint. The diminutive scale of these spaces is countered in the bedroom by opening the outer wall to sizable terraces. Beyond, structural innovation is again strikingly in evidence with the canopy leading up to the guest wing. Consisting of a single slab that gains its structural integrity by both its stepped sequence and its curving form, this outdoor shelter is dramatically anchored to its stone base by only a single steel lally column near the outside edge of each of its seven tiers.

Fallingwater is an extraordinary example of a longstanding tradition in the United States, where houses designed for weekend or seasonal use are laboratories for developing new ideas in residential design and in architecture more broadly. The intense play between openness and constraint, the degree to which living functions are combined in a single space, the interweaving of precision, ruggedness, and structural innovation, and especially the unified nature of the composition, have had a lasting impact on Modern architecture.

The Herbert and Katherine Jacobs House in Madison, Wisconsin (1936), is a standard-bearer for its era in the design of freestanding, single-family houses of modest size—a design that could be replicated, with variation, in great numbers. The design gives a maximum sense of spaciousness to living areas—inside and out—all organized in response to the increased need for privacy in the automobile age. The concept for this scheme emanated from Wright's Broadacre City (1933), his famous utopian plan for a fully decentralized, automobile-oriented matrix for settlement. The Jacobs House provided the first opportunity to refine the Broadacre idea of a "typical" freestanding house in built form and served as the prototype for subsequent dwellings, some much larger, which he called Usonian houses. Constrained here by a small site in a middle-class suburban subdivision and by the limited means of the clients during the Depression, the Jacobs House introduced a number of innovations to address these challenges. The building is situated near one corner of its lot so as to take maximum advantage of the remaining open space, in contrast to its neighbors (and dwellings of this type generally), which were more or less centered on their sites. The Jacobs House is oriented to this open area, privatized through landscaping, turning its back to the street to muffle the noise of passing motor vehicles. This configuration was again a contrast to the norm, in which frontal orientation remained standard. Moreover, the L shape allows maximum exposure to the yard for the living and bedroom wings alike. This siting not only greatly enhances the sense of spaciousness—indoors and out—but gives the rooms full solar exposure

during the harsh winter months when it is most needed—a pioneering example in Modern residential architecture of enhancing thermal properties through natural means.

Heating the Jacobs House was also accomplished by a then-novel use of pipes embedded in the concrete floor slab. Pumping hot water allowed the slab itself to radiate heat evenly in every space. The elimination of radiators (then the prevalent means of heating in the United States), of a basement, and the use of an open carport instead of an enclosed garage were all new devices employed to reduce cost. Equally important was the sandwich wall construction devised for this dwelling, using horizontally laid pine boards and battens—inside and out—with a plywood sheet wrapped in paper between them. The system was devised to speed assembly, without conventional framing, and to minimize wall thickness while providing ample insulation (by standards of the time). The sandwich wall was also conceived to facilitate prefabrication so that such houses could be manufactured in quantity and components readily delivered to their respective sites. The inherent qualities of stained pine boards, with alternating battens, also gave the interior a visual richness while precluding the need for plaster or for wall decorations. As in a traditional Japanese house the entire scheme is developed on a modular grid. Wright designed all the furniture, mostly out of plywood, demonstrating that one could live in an individual gesamtkunstwerk without incurring great expense.

Spatially the Jacobs House is innovative in its organization, with the largest square footage allocated to the living area that seamlessly connects to a dining area set in a glazed nook that also opens to the kitchen. The latter space is tightly configured like those in modest apartment units of the period. For a house of limited size, there is also an unusual degree of connection between indoors and out, with pairs of glazed swinging doors tying the living area to an outside terrace (an extension of the floor slab) and to the lawn that lies adjacent to the three bedrooms in the other wing. All these elements were conceived to maximize livable space and a sense of spaciousness for budget-conscious, middle-class families.

Reinventing housing to address increasingly informal living patterns and also the demands of a depressed economy was a major concern of proponents of Modern architecture during the interwar decades. In the United States that concern extended to maintaining the viability of building modest-sized middle-class houses. After World War II home builders took up the challenge for a considerably larger, new mass market. Alfred Levitt, chief designer for Levitt and Sons, the most famous large-scale house developers in the United States, spent months studying one of Wright's later Usonian houses while it was under construction on Long Island in New York. The attributes found in the Jacobs House's effective integration of openness within a compact matrix and use of a slab floor as well as a carport had a significant impact on the firm's subsequent work. The subject of widespread publicity, the Jacobs House itself became an important point of departure for the design of moderate-size dwellings of various types internationally.

Taliesin West, in Scottsdale, Arizona (begun 1938), complements Fallingwater and the Jacobs House in demonstrating the broadening scope of expression in Modern architecture. However, the differences between the three in form, materials, and character—irrespective of function or site—are so pronounced that they hardly seem to emanate from the same hand. Indeed, Taliesin West seems to turn the tenets of Modern architecture upside down. The rugged stonework at Taliesin and Fallingwater appears refined compared to that at Taliesin West, where unquarried stone taken from the site is drenched in messily formed concrete to the point where the rocks seem to float, creating an effect that is raw, even primordial. This "crude" use of masonry was employed in direct response to the rough desert setting, one that was then widely considered to be hostile to habitation. Yet the experience of the processional path through Taliesin West is rich and warm. If Taliesin and Fallingwater seem to spring from the landscape, Taliesin West embeds itself in its setting, scarcely differentiating its profile from the desert when viewed at a distance. The site was quite isolated when the complex was begun amid a great expanse of desert, 21km from the then small community of Scottsdale, with the jagged peaks of the McDowell Mountains forming a backdrop.

At the same time the complex also has an air of impermanence, as if it were a camp. Above the stone are redwood (and later steel) beams set at a fifteen-degree angle, their ends formed like U-shape brackets, which serve as visual anchors and also make the beams appear to float above their masonry bases. This unusual structural solution enables a clear span over the large drafting room as well as the main living area, punctuating those spaces and giving them scale, while enhancing the jagged profile from without. Here, as in Fallingwater, structure becomes a primary basis for expression, albeit to very different effect. The bold form and scale of these beams also offers a striking contrast to the roofs they support, originally made of canvas and now of fiberglass. The translucent attributes of these materials enhance the analogy to a great tent, providing shelter with an economy of means. Filled with light and flowing air, the workspaces nonetheless convey a sense of complete enclosure, much like a traditional desert tent. This emphasizes the intentional effect of moving through the sequence of spaces in the complex.

If structure and materials suggest a oneness with the tough, arid landscape they also stand in opposition to adobe, the material that was traditionally most widely used in desert settings—in the Southwestern United States, in Saharan Africa, and elsewhere across the globe where such extreme conditions exist. Adobe resists supporting heavy loads and also must be regularly protected by a coat of mud plaster (or in recent years, stucco). By its very nature the form of adobe is soft, without much texture (except where a new protective coat is needed), and forms massive walls with minimal openings. Taliesin West is not only the polar opposite in a material sense, it is antithetical in its permeability. Here, the structure was configured to allow the penetration of warmth from the sun through its canvas roof and also the free flow of air from one side to another, enhanced by the roof's angle. Like the Jacobs House, Taliesin West is designed to take full advantage of natural forces to enhance the building's habitability.

As it was precocious in its response to climate, Taliesin West also set an important precedent in showing how intense ruggedness and modernity need not be contradictory qualities, but ones that could be integral contributors to a whole. The angular geometry that shapes the complex in plan and in elevation contributes to this sense of unity by emphatically conveying a taut, abstract order.

The Solomon R. Guggenheim Museum in New York City took well over a decade to realize from conception to completion (1959), but throughout the process its design radically redefined what an art museum could be. Breaking from convention in the realms of both eclecticism and modernism, the Guggenheim is not a background for the display of art, but rather a work of art in itself—an active contributor in a dialogue between painting and architecture. In both form and space, it stands in conspicuous contrast to New York's Museum of Modern Art (MoMA; original building, 1939), an institution intended to define the nature of significant contemporary painting, sculpture, and architecture (and later other artistic media), whose new building was completed only a few years before studies for the Guggenheim began.

Paralleling the design of Unity Temple some four decades earlier, the Guggenheim is entirely inward in its orientation, ignoring—and in this case defying—its urban grid setting along Fifth Avenue. In the mid-1950s, when the design was finalized, nearby blocks of that street were lined on the east side with high-rise apartment houses from the 1920s and newer ones constructed after World War II, combining to form a nearly continuous wall facing the open expanse of Central Park to the west. The Guggenheim's mass was (and remains) an abrupt, somewhat tempestuous break in this urban order, its muscular curving forms holding their own amid the taller planarity of buildings on neighboring blocks. Like Unity Temple, too, the structure is comprised of monolithic reinforced concrete, and its entrance, if frontal, is underplayed. The basic similarities end there. The museum is much more structurally adventurous and is also organized as an important public space rather than a sequestered place of worship.

The Guggenheim's exterior dramatically bespeaks its inner configuration. Unlike most museums, irrespective of period, the exhibition space was originally a single, continuous volume. This area, known as the rotunda, is a six-tiered spiral, its floor extending upward as high walls on the perimeter and as a low parapet facing the atrium. (Later modifications and a rear addition have not significantly changed the configuration or the power of this space.) While anchored to a triangular stair tower set off to one side, the spiral structure is essentially self-supporting—one of the most daring uses of concrete at that time. In contrast to the cross-axial spatial order common to eclectic museums of the nineteenth and early twentieth centuries and to the looser arrangements found in the then small number of modernist example such as MoMA, movement at the Guggenheim was tightly choreographed. One enters the atrium (or rotunda) fairly abruptly from the outside. From there the intent was to ascend in an elevator to the top floor, then walk down the spiral to examine the art. The use of a circular geometry, with which Wright had experimented for some years, here commands every aspect of movement and the overall experience. The Solomon R. Guggenheim collection (the building was intended to house a personal collection, not to mount or host temporary exhibitions) consisted of a stunning array of early-twentieth-century European avant-garde work, much of it by former members of the Bauhaus faculty who were instrumental in redefining the ways objects and space could be depicted in two dimensions. The building's unorthodox, processional layout, circular geometry, and the spatial drama it induces in the procession can be read in part as an American rejoinder to the achievements of European artists, suggesting the supremacy of architecture and of organic principles as a means of reinterpreting form and space.

While the solution remains a singular one, it nevertheless formed a foundation, in the United States and abroad, for a new era in museum design, whereby the building's form is an active agent in the experience of art. The design was also a pioneering example globally of a new adventurousness in the use of reinforced concrete structure that became seen as a means of conveying a sense of strength and purpose in architecture without lapsing into traditional patterns of monumentality.

The possible extensions to this proposed series would demonstrate some further elaboration and variation on the essential attributes described above. The Ward Willits House (Highland Park, Illinois, 1902) is the first full manifestation of Wright's mature domestic style in the early twentieth century—the first realization of the Prairie idiom. The plan, structure, furnishings, art glass and interior and exterior spaces were devised as a coherent synthesis of interrelated elements. Bands of floor-to-ceiling leaded art-glass windows open to the garden, allowing nature to penetrate the interior. Rooms are oriented along a cross-axial plan and ceiling heights are modulated to create a sense of progressive expansion and contraction. The Robie House is its culmination and fullest expression of these ideas.

The Tazaemon Yamamura House (Ashiya-shi, Japan, 1918) is a hillside house that in many ways anticipates later work such as Fallingwater in its connection to landscape, and Taliesin West in its spiral path of movement. It is also a remarkable blend of traditional Japanese elements with those of Wright's Prairie houses making it a bridge between the two that results in something entirely new.

The Alice Millard House, "La Miniatura" (Pasadena, California, 1922), demonstrates another variation on the expression of the intrinsic qualities of materials, through the use of concrete in a manner called "textile block." Here Wright experimented integrating the ornamental treatment of the concrete block with its structural function, making form and structure entirely one. Like Hollyhock House, it looks to ancient American forms for inspiration and seeks to manifest the distinctiveness of southern California, but differs by having structure form and ornament all one and the same.

The most singular of the contemplated extensions, the S.C. Johnson Administration Building and Research Tower (Racine, Wisconsin, 1935; 1944) is, like Fallingwater, a tour de force in its structure. In the Administration Building, structure is devised to serve atmospheric ends, to create a special environment—in this case for a large office—rather than to solve a structural problem. The tower, on the other hand, was the first time Wright was able to execute his very original idea of making a multi-storied building analogous to a tree's structure. It is also a stunning illustration of how an addition can contrast with and complement the original work.

The Paul Hanna House (Stanford, California, 1936) is a powerful demonstration of how the Usonian house concept can be employed effectively in a considerably larger residence, using a more complex geometry than the simple grid of the first Jacobs House. Though the original house was economical in construction, Wright later expanded it, and the result is a more elaborate design in which the spatial limitations inherent in the first Jacobs House are not apparent. It also offers a superb response to the topography on a sizable lot.

The Herbert and Katherine Jacobs House II (Middleton, Wisconsin, 1944) was a very precocious domestic concept in having passive solar heating form the basis for the design, and inclusion of a bermed wall to protect the building from winter weather. This, with other sustainable construction approaches that were far ahead of their time, have made it widely known and influential.

Irrespective of the strong individual characteristics of the eight buildings in the nominated series, *The 20th-Century Architecture of Frank Lloyd Wright* constitutes a whole that is greater than the sum of its parts by underscoring the richness and complexity of this organic approach to Modern architecture over the span of more than half a century. The series also underscores the basic consistency of that approach, developing an abstract, geometric vocabulary based on nature's forms and principles. The series demonstrates the substantial range in functions and scales to which that approach could be effective.

Collectively these buildings reveal the importance of function as a basis for creating form. They exhibit the continual search for new structural solutions, new uses of building materials, and new spatial environments. The series shows a very broad spectrum of responses to urban, suburban, and rural sites. Equally significant, the series illustrates the consistent importance of addressing human needs in the twentieth century—for the city house and the country retreat, for the suburban residence of modest size and the urban mansion devised for elaborate entertaining, for a house of worship, and for an art museum that provides for a new sociability. Each component of this series constitutes an important piece to this rich mosaic that is widely acknowledged to be one of the greatest contributions to twentieth-century architecture.

3.1.a Brief Synthesis

The 20th-Century Architecture of Frank Lloyd Wright is a series of eight buildings that illustrate a full range of ways in which Wright's unique approach to architectural design fused form with spirit to influence the course of architecture in both North America and beyond. The components, located in six states across the continental United States of America, were designed and built over a period spanning the first half of the twentieth century. Each has strong individual characteristics, presenting a specific aspect or facet of a new architectural solution to the needs of Americans for housing, worship, work, and leisure. The buildings employ geometric abstraction and spatial manipulation as a response to functional and emotional needs and are based literally or figuratively on nature's forms and principles. In adapting inspirations from global cultures, they break free of traditional forms and facilitate modern life. Wright's solutions would go on to influence architecture and design throughout the world, and continue to do so to this day.

The components of the series include houses both grand and modest (including the consummate example of a "Prairie" house and the prototype "Usonian" house); a place of worship; a museum; and complexes of the architect's own homes with studio and education facilities. These buildings are located variously in city, suburb, forest, and desert. The substantial range of function, scale, and setting in the series underscores both the consistency and the wide applicability of these principles, which are often called "organic architecture." Each has been specifically recognized for its individual influence, which also contributes uniquely to the elaboration of this original architectural language.

The series showcases innovations such as: the open plan; the blurring of the boundary between interior and exterior; new uses of materials such as steel and concrete, as in cantilevered construction; new technologies such as radiant heating; the embrace of the automobile; and explicit responses to natural settings. Such features, however, are subordinated to designs that integrate form, materials, technology, furnishings, and setting into a unified whole. Each building is uniquely fitted to the needs of its owner and its function, and, while designed by the same architect, each has a very different character and appearance, reflecting a deep respect and appreciation for the individual and the particular. Together, *The 20th-Century Architecture of Frank Lloyd Wright* illustrates the full range of this architectural language, which is a singular contribution to global architecture in spatial, formal, material, and technological terms.

3.1.b Criteria Under Which Inscription is Proposed (and Justification for Inscription Under These Criteria)

Criterion (ii)

To exhibit an important interchange of human values, over a span of time, or within a cultural area of the world, on developments in architecture.

We have identified three attributes that support the application of this criterion for the series. They are elaborated below.

EXPLANATION OF ATTRIBUTES

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

1A. Spatial continuity expressed through the open plan and blurred transitions between interior and exterior spaces

1B. Dynamic forms that employ innovative structural methods and inventive use of new materials and technologies

1C. Richness of experience created through contrast and carefully composed paths of movement

Wright often wrote about the "destruction of the box," a goal first fully realized in Robie House's open plan. He saw rooms in typical houses of the early twentieth-century as boxes, each with a specific function, and fitted inside a larger box—the house. To relieve the sense of confinement, he attacked the box at its strongest point, the corner, by allowing spaces formerly separate to overlap and flow into one another resulting in a new sense of spaciousness. He placed windows and doors in ways to minimize perception of exterior corners, carried materials and planes seamlessly from inside to outside, and added exterior spaces in the form of terraces and courtyards. Together these techniques effectively blurred the distinction between interior and exterior space, and would become a hallmark of modern architecture.

To achieve these effects, the designs often stretched the limits of design and technology through gravity-defying cantilevered forms. The pioneering use of reinforced concrete would alter the way architects viewed the material. Innovative methods and technologies in heating and cooling allowed greater comfort in locales of climatic extremes, and prefabrication and the use of plywood facilitated the construction of affordable housing.

The viewer experience is the paramount goal of these techniques. Movement is carefully choreographed as the viewer moves from dark confined volumes up and into bright, open, and dynamic ones. Vistas offered from one space into spaces beyond, sometimes including the external landscape, invite exploration. With the use of contrast, the variety of experience is made even richer: dark and light spaces, concave and convex forms, the juxtaposition of raw materials against refined ones; low and high ceilings, and the sensations of compression and release, discovery and surprise, refuge and prospect. At the same time function and comfort are never forgotten, and the user of the space is always at the center of the design.

Attribute 2: Design inspired by nature's forms and principles

2A. Integral relationship with nature

2B. Unity of design expressed in integration of the parts to the whole

2C. Intrinsic qualities of materials expressed

In his 1908 essay, "In the Cause of Architecture," Wright wrote, "The Prairie has a beauty of its own, and we should recognize and accentuate this natural beauty, its quiet level. Hence, gently sloping roofs, low proportions, quiet skylines, suppressed heavyset chimneys and sheltering overhangs, low terraces and outreaching walls sequestering private gardens."

For Wright materials were to be used in ways that express their inherent nature. He wrote, "A stone building will no more *be* nor will it *look* like a steel building. A pottery, or terra-cotta building, will not be nor should it look like a stone building. A wood building will look like none other, for it will glorify the stick. The steel and glass buildings could not possibly look like anything but itself. It will glorify steel and glass. And so on all the way down the long list of available riches in materials…."

Wright developed a system of logic based on nature's principles of growth, variation, and adaptation, often referring to his buildings as "organisms." Like organisms, these buildings share another important natural characteristic—the way the various parts relate to create a unified whole. In this series, unity is achieved through a coherence of geometry, the reiteration of design motifs in a variety of forms and scales, and continuity expressed through a limited palette of materials and color.

Part of this concept is an integral relation of various aspects of design to nature's forms—metaphorically or literally. For Prairie houses, the flat Midwest landscape is suggested through the strong horizontality of form, low-pitched and sheltering roofs with broad eaves, low ceilings, and horizontal bands of windows. Where the terrain is more distinctive, as in the rolling hills of Wisconsin, Arizona desert, or rugged mountains of western Pennsylvania, continuity between the house and setting is made literal through forms and materials that echo those of the natural setting.

The materials were chosen and used to highlight their inherent characteristics. Thus concrete is used in ways that emphasize its plasticity, wood is often not painted, but steel is always painted red to indicate its origin as a product of red iron ore produced in fire. Where stone is used, it retains its natural rough finish and orientation.

Attribute 3: Architecture responsive to an evolving American experience

3A. Changing modes of living are addressed

3B. Primacy of the individual and individualized expression

3C. Transforming inspirations from other places and cultures

Wright called for "an indigenous and varied architecture for my American people," one that would be a tangible expression of the Jeffersonian ideal of democracy to shape social values such as honesty, freedom, and individuality.

Wright's architectural designs were deeply motivated by a concern for those who would be using the buildings. The architectural innovations in this series respond to social changes Wright observed in the United States and to his fundamental understanding of the American character as fiercely independent, self-reliant, and inventive. All of the works in this series embraced the *new*, in the service of new modes of living in the twentieth-century. Many domestic works in the series feature outdoor spaces for relaxation and entertaining, which suited those seeking more casual, less formal, homes and social experiences. His Usonian houses were a direct response to the need for domestic comfort among the growing middle class that lived without servants. The public buildings in the series reject traditional modes of worship and viewing art to foster what he saw as more meaningful interactions. The work also shows a prescient embrace of the eventual impact of the automobile on American culture.

Wright wrote, "There should be as many kinds (styles) of houses as there are kinds (styles) of people and as many differentiations as there are different individuals. A man who has individuality (and what man lacks it?) has a right to its expression in his own environment." Though each component in the series embodies the same architectural principles, their range of expression is diverse. Each building is uniquely fitted to client, program, and setting.

Rejecting European models, which prevailed in American architecture in the early twentieth-century, these works draw inspiration instead from such diverse sources as ancient Mesoamerican temples and traditional Japanese architecture, which Wright saw as more suited to his architectural aims. However, the result is never derivative or superficially adapted. Instead, these designs synthesize critical aspects, particularly from Japanese design traditions, to create forms that were entirely new, and often radically so. Just as American culture adapted and synthesized many traditions into itself, so the buildings in this series transform architectural ideas from other cultures into something entirely new.

The following chart (see pages 196-197) summarizes the way in which the attributes are expressed by each building in the series. A textual elaboration follows the chart.

CRITERION (ii): To Exhibit an Important Interchange of Human Values, Over a Span of Time,

	ATTRIBUTE 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation			ATTRIBUTE 2: Design inspired by nature's forms and principles		
SERIAL COMPONENT	**1A.** Spatial continuity expressed through the open plan and blurred transitions between interior and exterior spaces	**1B.** Dynamic forms that employ innovative structural methods and an inventive use of new materials	**1C.** Richness of experience created through contrast and carefully composed paths of movement	**2a.** Integral relationship with nature	**2B.** Unity of design expressed in integration of the parts to the whole	**2c.** Intrinsic qualities of materials expressed
UNITY TEMPLE		Widely influential for abstract cubic form and early use of reinforced concrete	Circulation reveals contrasts between light/dark, solid/void, compression/release		Its exterior cubic form is reinforced on the interior by thin oak strips that weave together cubic volumes, piers, balconies, and ceiling through continuous and dynamic patterns while amber art glass skylights wash the interior unifying the whole	Nature of concrete expressed in early example of béton brut
FREDERICK C. ROBIE HOUSE	Open plan changed domestic architecture	Dramatic roof cantilever creates floating effect	Compression/release as one ascends from narrow entry to expansive main floor	The quintessential "Prairie house" is a metaphor for horizontality of Midwest landscape	Growing out of its rectilinear form, the horizontal theme continues in the interior through bands of art glass doors, an elongated open plan, and interior trim all which are reinforced by the details of custom furnishings and fixtures	
TALIESIN	Rooms extend out to gardens and terraces		Meandering form incorporating thresholds, gardens and vistas creates meaningful experience of place	Consummate example of organic connection to the landscape		Rustic stone work echoes its natural state
HOLLYHOCK HOUSE	Lawns, courtyards, rooftops are part of living space		Composed paths of movement lead inside and out, up and down, and through open and closed, and light and dark spaces		Integral ornament based on stylized hollyhock unites building, interior decoration and landscape elements	
FALLINGWATER	Continuity of materials expressed: stone floors carried out to terraces, exterior concrete and stone walls continue inside	Reinforced concrete for cantilevers stretched capacity of technology	A visceral experience of nature and architecture as one	The waterfall inspired the design	A limited palette of materials, color, and design motifs, derived from natural features at the site and reiterated throughout, creates an unprecedented example of unified design	Undressed masonry laid to imitate natural stone, plasticity of concrete and color of steel predominate
HERBERT AND KATHERINE JACOBS HOUSE	Dramatic spatial continuity achieved through use of modest materials and on a small scale		Dramatic contrast between compact entry and large volume of living room, expansive garden	House positioned to take maximum advantage of suburban garden, contrasting with traditional site plan	A study in elimination and simplicity, in which all the parts–siting, form, spatial arrangement, and materials work in unity to serve the whole–a modest, yet artistic home	Simply finished wood and unadorned brick used as interior wall finish
TALIESIN WEST	Rooms open out on and extend into desert environment		Power of place revealed through choreographed processional through space	As much a work of landscape architecture as it is architecture		Innovative desert masonry expresses texture, color, and materiality of desert environs
SOLOMON R. GUGGENHEIM MUSEUM		Interior cantilevered spiral ramps expressed in exterior form	Architecture creates extraordinary emotional response and a new museum experience		Circle motif expressed in spiral form, internal ramp and skylight	Plasticity of concrete expressed in sculptural form

☐ Primary Attribute ☐ Secondary Attribute ☐ Other Attribute

or Within a Cultural Area of the World, on Developments in Architecture

ATTRIBUTE 3: Architecture responsive to an evolving American experience				
3A. Changing modes of living are addressed	**3B.** Primacy of the individual and individualized expression	**3C.** Transforming inspirations from other places and cultures	**Component's influence on the development of architecture**	**SERIAL COMPONENT**
	Modern form for the vernacular meeting house: the individual's experience central to the design		Icon of Modern Movement. Wasmuth portfolio and later Wendingen edition impacted early Dutch and German modernism: use of Cubist form seen in dissolving planes and the role of perception; approach to urban setting (or shielding from it) characterizes public and institutional buildings of the 1960s and 1970s.	**UNITY TEMPLE**
Heating technology and informality support use of the open plan		Japanese influence (deep eaves, low hipped roof) employed in support of horizontal landscape metaphor	Icon of Modern Movement. Wasmuth portfolio and later Wendingen edition impacted early Dutch and German modernism: use of shifting planes, bands of windows, and the role of perception; inspired Walter Gropius (Haus Sommerfeld) and Mies van der Rohe (Barcelona Pavilion).	**FREDERICK C. ROBIE HOUSE**
An integrated setting for living and working		Western and Nonwestern influences (Japan and Italy) are synthesized into a new architecture	Consummate example of organic architecture: Elimination of bilateral symmetry inspired Mies van der Rohe, Rudolf Schindler, Richard Neutra, and Werner Moser who all visited or apprenticed with Wright while there.	**TALIESIN**
	Outstanding expression of a highly personalized dwelling	A model for the modern interpretation of forms from indigenous cultures	Modern alternative to Art Deco exoticism. Poetic expression helps establish California modernism; inspired Rudolf Schindler, Richard Neutra, and Harwell Hamilton Harris who all visited or worked on structure under Wright.	**HOLLYHOCK HOUSE**
	A unique house tailored to the interests and activities of its owner.	American response to International Style	Icon of Modern Movement epitomized integration of landscape with architectural design and blurring between interior and exterior spaces; inspired Alvar Aalto (Villa Mairea) and Paul Rudolph (Bass Residence).	**FALLINGWATER**
Prototype for modest, detached, servant-less, single-family suburban houses	The Usonian concept fostered a life of artistic individuality for the middle class	Japanese (modular planning) and Korean (radiant heating) influences transformed into an American suburban form	Modern prototype for modest single-family house. Introduced ideas of the "great room" and American "ranch" style; inspired post-war architectural style of Joseph Eichler and Alfred Levitt, and Jørn Utzon (personal home, Hellebæk, Denmark).	**HERBERT AND KATHERINE JACOBS HOUSE**
		Indigenous American influences are a continuous theme	Prototype for use of rustic materials in modern architecture. Modernism no longer seen as based on technology; rubble stone introduced as acceptable material for modern building; influenced Alvar Aalto (personal studio), Paolo Solari (Arcosanti), and Sidney Press (Coromandel Estate, Mpumalanga, South Africa).	**TALIESIN WEST**
Prototype of art museum where the building itself is an art object			Icon of Modern Movement. Made the museum a destination in itself, its design a foil for the collection. It also made viewing art a communal adventure.	**SOLOMON R. GUGGENHEIM MUSEUM**

Summary of Each Building's Contribution to Outstanding Universal Value

UNITY TEMPLE

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

Unity Temple is the primary illustration in the series of the use of dynamic forms that employ innovative use of materials.

It is one of the first truly modern buildings in its abstract cubic form and progression of spaces. It unites aesthetic intent and structure through the early use of a single material—reinforced concrete. Unity Temple is the oldest building in the series, built in the first decade of the twentieth century. It was a radical break from long standing Western notions of enclosure as well as from conventions of religious architecture. Its use of monolithic reinforced concrete for a public building, rather than an industrial structure, was groundbreaking.

FREDERICK C. ROBIE HOUSE

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

The Robie House is the primary illustration in the series of spatial continuity expressed through the open floor plan.

Robie House is considered the quintessential Prairie house. One of the primary features of that form is the open plan. Built in 1910, when domestic architecture commonly adhered to vertical massing with a fixed hierarchy of spaces, this house perfected a new paradigm for domestic design by allowing interior space to flow from one room into another in a primarily horizontal form.

TALIESIN

Attribute 2: Design inspired by nature's forms and principles.

Taliesin is the primary illustration in the series of an architectural form that has an integral relationship with its natural setting.

The consummate example of organic architecture, Taliesin appears to grow from its hillside, with extensive use of local materials and carefully planned vistas of the surrounding farms and hills. Wright experimented with and refined this relationship over the period of his long residence in the property.

HOLLYHOCK HOUSE

Attribute 3: Architecture responsive to an evolving American experience.

Hollyhock House is the primary illustration in the series of the transformation of inspirations from other places and cultures.

This highly unified design is a model for the modern interpretation of indigenous forms. It was designed and built in Hollywood during 1918-1921 as the movie industry was becoming established there. In contrast to the primarily externally applied, "exotic" ornament of Art Deco, this house features a fundamental form that recalls ancient Meso-America. Its ornamentation, while suited to the theatricality of its setting and its use as an arts complex as well as a residence, is integral to the form.

FALLINGWATER

Attribute 2: Design inspired by nature's forms and principles.

Fallingwater is the primary illustration in the series of unity of design, expressed in the integration of the parts with the whole.

Fallingwater is a tour de force that uses a limited palette of materials, color and design motifs that are all derived from the natural features of the woodland site where it was built. Reiterated throughout the structure, they unify the composition and tie it uniquely to its setting.

HERBERT AND KATHERINE JACOBS HOUSE

Attribute 3: Architecture responsive to an evolving American experience.

The first Jacobs House is the primary illustration in the series of how this architecture addressed changing modes of domestic living in the twentieth century.

This is the first of Wright's Usonian houses, an artistic design for a family of modest means and without servants. Built during the Depression years in the 1930s, it responded to the housing needs of ordinary Americans with a detached, single-family suburban home. Innovative in organization, plan and construction, it responded to increasing informality in society in the mid-twentieth century and supported the viability of houses for the middle class.

TALIESIN WEST

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

Taliesin West is the primary illustration in the series of contrast and carefully composed paths of movement creating richness of experience.

This complex seamlessly blends structure and landscape in ways that evoke ancient cultures and primordial qualities of its desert setting. The effect is achieved through a choreographed procession through its spaces formed of rugged materials. The property has a timeless quality that is yet distinctly modern in sensibility.

SOLOMON R. GUGGENHEIM MUSEUM

Attribute 3: Architecture responsive to an evolving American experience.

The Guggenheim Museum is the primary illustration in the series of how this architecture addressed changing modes of public living in the twentieth century.

The Guggenheim is the prototype for the modern art museum in which the building becomes the primary work of art, immersing the visitor in an environment evoking an emotional response. Its circular form provides a disruptive contrast to the rectilinearity of the city for which it was designed.

How Each Component Building in the Nominated Series Expresses the Attributes

UNITY TEMPLE

Unity Temple was one of the first, if not the first, monumental public edifices created in a material previously reserved for more utilitarian buildings – concrete. The intrinsic quality of the material is frankly expressed; its austere surface tempered by exposing the finer pebble aggregate. Unity Temple's radical cubic appearance, derived from the traditional meeting house form, was intended as a manifestation of the denomination's progressive beliefs. Its form expresses both its monolithic construction and interior functions: the sanctuary at one end, the social room at the other, with a foyer connecting the two. The sanctuary, in particular, is notable for its spatial complexity and integration of parts. The ceiling grid and other minor elements, including light fixtures and wood striping on balcony parapets, repeat in an interlocking frame of lines in space resulting in a dynamic and unified spatial composition. Paths of circulation from the exterior into the lobby, then to the sanctuary are not only circuitous but also filled with contrasting experiences of compression and expansion as well as light and dark over multiple levels, surprising the viewer with its visual and emotional intensity.

FREDERICK C. ROBIE HOUSE

The quintessential Prairie house, the Robie House, has been called Wright's "spatial and technological manifesto" by Reyner Banham. The open plan of its second-floor living space is widely credited with changing domestic design by allowing interior space to open up and flow from one room into another. Its bold horizontality, at once ground-hugging and gravity-defying, is an abstract embodiment of the flat Midwest prairie landscape and expressed through projecting cantilevered roofs, deep eaves, continuous bands of art-glass doors, and expressive use of Roman brick. The Robie House's low hipped roofs and deep eaves are reminiscent of those in Japanese temples; however, the eaves are also functional. In summer they protect occupants from the heat of the midday sun, while in winter when the sun is lower on the horizon, they allow passive solar gain. In summer the courtyard on the north serves as a cool-air tank, and the broad bands of art glass doors provide interior ventilation. Innovations include the integration of heating and lighting within the structural and decorative framework of the house, and the inclusion of an attached three-car garage is an early example of the incorporation of the automobile into modern residential architecture. The pathway into the house creates an emotionally rich experience of compression and release: a concealed entry and a small vestibule leading up a narrow, twisting stairway that brings one suddenly into the bright and open main living space.

TALIESIN

The consummate example of organic architecture, Taliesin appears to "grow" from its hillside setting; a synthesis of both Western and non-Western traditions given new form appropriate to the pastoral Midwest and the Jeffersonian ideal of living, working, and farming. Through careful site planning and use of materials native to the site, Taliesin is a complete integration of the architecture of the building with its landscape; the flow of interior and exterior spaces seems to deny any barrier between the two. In no previous work had Wright disconnected one section of the building from another in the way he does at Taliesin where an open loggia between the living and studio wings allows the hill to pass through. Other elements of the building reach out into the landscape in various directions like growing organisms spreading their tendrils. Within the house, the rectangular living room, perched out from the hillside, is entered through the loggia off the corner, diagonally drawing the viewer's eye out to commanding views of the valley below. Together these devices result in a powerful experience of the spirit of architecture and landscape. Stonework, which had traditionally been cut as square blocks with a single rough-cut surface, gives way to long irregular stones unevenly placed to simulate natural strata. Lastly, the building's informal rambling and earth-hugging composition is in broad conception informed by hillside villas of the Italian Renaissance that Wright came to know firsthand while he was preparing the Wasmuth volumes at Fiesole, just outside Florence. The design also draws from traditional Japanese architecture by breaking down its expansive size into domestically scaled pavilions so that the complex in its entirety can only be comprehended with movement around the premises.

HOLLYHOCK HOUSE

Hollyhock House is an original adaptation of the local Spanish tradition of a patio house combined with ancient Mesoamerican forms appropriate to the history of the area. Set dramatically atop Olive Hill, Hollyhock House in its exterior expression suggests a Maya temple in its canted walls and massive, even monolithic, appearance, yet within its open courtyard, a fresh interpretation of the Spanish patio anchors the interior configuration. The result resonates with layers of cultures in the region far more meaningfully than the concurrent Art Deco, which relied on a pastiche of exotic ornament. Designed for a flamboyant oil heiress whose favorite flower was the hollyhock, the hollyhock as a decorative form is used to characterize the building as an expression of the personality of the client. The stylized hollyhock appears as integral concrete ornament on the exterior, unifying the building parts. The theme is reinforced decoratively through interior finishes and fittings such as furniture, light fixtures, and architectural elements. These, combined with gardens of hollyhocks surrounding the house,

further enhance the overall artistic effect and unify the building, interior decoration, and landscape. In this, Wright's first courtyard house, the design seamlessly melds exterior and interior living space. The relaxed and informal arrangement of rooms, each with its complementary outdoor space, became a model for new ways of living in which the outdoor spaces, courtyard, terraces, etc., are treated as extensions of the interior ones. A multi-level spatial experience around the open courtyard moving in and out of dark passageways into bright open space culminates on the roof terrace—one of the first in modern architecture—which provides sweeping views of the surrounding landscape extending from the Hollywood Hills to the Pacific Ocean. The result is a mythopoetic expression of southern California in a complex narrative sequence that Harwell Hamilton Harris described as "forms gathering in procession and pouring themselves out in melody; climax following climax." Hollyhock House is a romantic expression of southern California, giving the idea of regionalism a truly modern form.

FALLINGWATER

Fallingwater is an astonishing masterpiece of modern architecture in which two seemingly disparate forces—architecture and nature—exist in harmony. At once seemingly an outgrowth of the land and a striking counterpoint to it, a natural formation and a daring tour de force, Fallingwater's dramatic engagement with its sloping terrain uses cantilevered forms of reinforced concrete to create a dynamic three-dimensionality that stretched the capabilities of technology and design for the time. The building appears to cascade down the hillside ending in a series of soaring cantilevers that echo the ledges of the waterfall. A massive chimney of native stone appears like a giant vertical tree anchoring the house to its site. Reaching out from it like branches are smooth floating horizontal planes of concrete. A limited palette of color and materials used on the exterior and interior alike seamlessly unite the two. Colors and finishes throughout emphasize the intrinsic qualities of the materials used: all steel is painted "Cherokee Red" and an earthen tone of ochre colors concrete surfaces. Local stone laid in a rough, uneven fashion suggests the natural strata of the site's rock formations, and interiors are fitted with floors of flagstone polished to imitate the wet stone of the steam bottom. Interior stone walls and flagstone floors continue uninterrupted to the outside to become exterior walls and terrace floors blurring the distinction between the inside and out. Glass is scribed to disappear into stone walls and mitered to eliminate corners visually. A single species of wood, American walnut, is used for all built-in furniture and woodwork much of which, like the house, is cantilevered. Paradoxically, the rich overall experience of unity is enhanced by the use of contrast: prospect and refuge, security and danger, rough and smooth, light and dark, and compression and release. Fallingwater was a response to the machine age aesthetic of the International Style—a humanistic and site-specific work that embodied the maturing of Modern architecture and the tendency to broaden its scope of expression.

HERBERT AND KATHERINE JACOBS HOUSE

The prototype for the modest, detached, single family home that would become ubiquitous in America, the Herbert and Katherine Jacobs House combined technological innovations such as in-floor radiant heating and modular planning, which Wright learned of while traveling in Asia, with economical construction to provide a simple modern home of exceptional character that was accessible to an ordinary middle-class, post-war family. Its strong connection to nature is achieved by fitting the L-shaped plan snugly into the corner lot and turning its back to the street to open onto and embrace the garden through glazed full-height terrace doors that wrap around the corner of the living space and open at the corner to reveal no vertical corner support. Its unusual use of simply finished wood, unadorned brick, and concrete for both the interiors and exteriors unifies the design, simplified construction and helped contain costs, as did the use of prefabricated sandwich walls and an insulated slab roof. The result is a study in elimination and simplicity. Despite its small size, the experience of the space is dramatic. One enters the primary living space at the corner from a compact, low-ceilinged entry making the double height space seem much larger and more expansive than it physically is. Designed for two young professionals, it maximized economy and flexibility without sacrificing familiarity or comfort. Writing about the house in the *Architectural Forum*, Wright asked, "What are the essentials in their case, a typical case?" He went on to specify three experience-based criteria for the modern home: a transparent wall of glass to connect the living space to the garden; a compact "workspace", i.e., kitchen, to form the service core; replacing the central chimney mass as a spatial fulcrum; and a carport to fully integrate the automobile into the dwelling.

TALIESIN WEST

Taliesin West is a completely original concept of structure and form in response to the harsh climate and topological conditions of the American southwest. Angular shapes in plan and section are used to organize the desert site and echo its mountain backdrop. Walls of unquarried stone taken from the site and placed in a slurry of concrete in which the rocks seem to float, create an effect that is raw, even primordial. Ancient petroglyph boulders, found at the site and in the surrounding area are located in the site to connect Wright's work with ancient settlement and activity in the area encompassing Taliesin West, thereby creating a sense of intimacy with the landscape in a historical as well as a physical

way, with rooms opening out on and extending into the desert environment. A repeated motif of a traditional Native American design called the "whirling arrow" (a squared spiral), seen in both the plan of the complex and as a decorative element, further evidence indigenous American influence. Pathways, plazas, and open spaces are integrated with the multiple structures to define a series of axes related to the topographical features of the site in such a way that gives the site a greater meaning than it might otherwise have had. All the spaces in the complex are calculated for views toward the landscape and its special features. Many early visitors to the site spoke of the building as appearing like an ancient ruin, with a timeless character. The movement through the site, from the entrance sequence, through the pergola, out onto the prow, and finally into the main living spaces, was characterized by Philip Johnson in the late 1940s as the most extraordinary and first example of what he would call the processional aspect of architecture.

SOLOMON R. GUGGENHEIM MUSEUM

The Solomon R. Guggenheim Museum radically redefined what an art museum could be. The fusion of spatial drama with the spiral form represents a culmination of the evolution of Wright's ideas of organic architecture by creating its own unified and emotionally rich interior that Philip Johnson called, "one of the greatest rooms of the twentieth century." The Guggenheim's daring reinforced-concrete structure is a seamless integration of program, form, structure, and materials. Wright spoke of its unity of form: no angles or abrupt changes of shape. Made of a single material, concrete, painted a single color—white, the material's inherent plasticity is deftly expressed in its curved form. Rarely does a building's exterior form so clearly convey its interior functional organization. At the Guggenheim, the exterior form appears as a series of rising and swelling curved layers separated by continuous bands of negative space. Entering the building one immediately grasps how the exterior form shaped the interior space with its continuous cantilevered ramp that expands as it spirals up to a round, domed skylight. The unprecedented integration of circulation and gallery space makes visiting the museum a social as well as an artistic experience whereby visitors sense what the first director of the museum called a new "sociability." The circular form also signaled the novelty of the modern art within, in its stark contrast to the grid of New York City and its rectilinear, upright neighboring buildings. While the solution remains a singular one, it nevertheless formed a foundation, in the United States and abroad, for a new era in museum design, whereby the building is seen as the primary work of art and as such is an active agent in the experience of art.

Conclusion: Demonstration of the Influence of the Series

THE INFLUENCE OF FRANK LLOYD WRIGHT'S architecture is well documented. Significant exhibitions that featured Wright's designs made his architectural contemporaries aware of his work and provided a means for potential clients to understand his design viewpoints. Similarly, publications of his essays and speeches in trade journals and popular consumer magazines gave testament to what would become a philosophy of organic architecture. As his fame grew, reproductions of his work as drawings or photographs reinforced his importance within the American and global architecture community. Those colleagues working with him as early studio associates, as well as those who later were apprentices at the Taliesin Fellowship, cited his importance as an architect and designer within their own careers, and this influence has continued steadily in the six decades since his death.

Early Career and Wright's Chicago Cohort

The architects Frank Lloyd Wright influenced the most during his early career were those working alongside him in Chicago, where he moved following a short period of study at the University of Wisconsin in Madison. There, he apprenticed for the architect Joseph Lyman Silsbee from 1887 to 1888 alongside future architects Cecil Corwin, George Maher, George Elmslie, and Irving Gill, designing residences that reflected Victorian and Revivalist styles. Aspiring to more progressive work, Wright joined the firm Adler and Sullivan, headed by architect-engineer Dankmar Adler and architect Louis Sullivan, first as an apprentice draftsman and later as the head draftsman for all residential projects within the firm.

Wright would consider Sullivan his "Liebermeister" throughout his career, and it was under Sullivan's guidance that Wright would soon supervise the firm's residential commissions, and where he contributed to the firm's acclaimed Auditorium Building (Chicago, 1889) and the polychrome proto-Modern Transportation Building for the World's Columbian Exposition (Chicago, 1893). That Fair also proved an important moment of cultural interchange as Wright recalled later he was first exposed to authentic Japanese architecture while visiting that country's pavilion, the H¯o-¯o-den (Hall of the Phoenix). This was the beginning of a lifelong appreciation of Japanese art and architecture for Wright, with its earliest manifestation in his Prairie designs a decade later.

Wright established a Chicago-based solo architectural practice upon leaving Adler and Sullivan in 1893, first in the downtown Chicago Schiller Building (until 1896), then to the newly constructed Steinway Hall (from 1896 to 1898), and finally to a studio addition to his Oak Park home (from 1898 to 1909). Wright

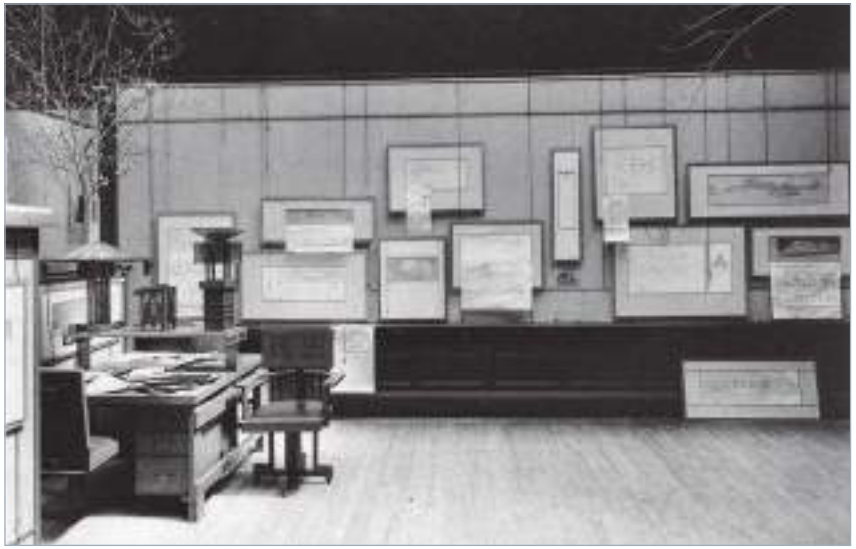
shared his Schiller Building office with Corwin, though they did not professionally partner on any projects, but it was while at Steinway Hall that Wright shared an office with architects Robert Spencer, Jr., Myron Hunt, and Dwight Perkins—all of whom were inspired by the Arts and Crafts movement and the buildings and writings of Sullivan—and with them discussed new ideas and problems of design. Marion Mahony (one of the first licensed female architects in the United States), soon joined the office and Wright's team of designers where she contributed presentation drawings and watercolor renderings in the manner of Japanese woodblock prints.

The Influence of Wright's Work through Exhibitions

The Steinway Hall itself became a symbol of the avant-garde and gradually its eleventh floor tenancy expanded to become colloquially known as "the Eighteen," later called the "Prairie School" of architects by historian H. Allen Brooks. The group now included Webster Tomlinson, Walter Burley Griffin, Hugh Garden, and Howard Shaw who discussed matters of mutual interest, among them the Chicago Architectural Club, an organization for draftsmen and young architects. They had twice-monthly meetings along with lectures, sketch nights, and design competitions with annual exhibitions held at the Art Institute of Chicago's new museum building. The club's membership presented most of the lectures, with Wright's "The Practical Nature of the Artistic," delivered on March 6, 1899.

As a cofounder of the Arts and Crafts Society, Wright allied it with the membership of the Chicago Architectural Club, which invited the Society to participate in their 1898 exhibition. There, Wright's designs were included with those by the English architect Charles Robert Ashbee. The pair met in December of that year, marking the first recorded visit by a non-American architect to Wright's studio and laying the foundation for Ashbee's future essay on Wright for the Dutch journal *Wendigen*. Many of Wright's Steinway Hall associates were similarly charter members of the Arts and Crafts Society, and for them, the Arts and Crafts Movement created a clientele sympathetic to their—and Wright's especially—designs. Because of the influence of these exhibitions, architect and client now "spoke the same language" of simplicity, elimination, and respect for materials.

A profusely illustrated catalogue of the Chicago Architectural Club's annual exhibitions ensured the public (i.e. potential clients) was apprised of the members' work and interests. Frank Lloyd Wright benefitted most from the exhibitions, participating in five of them between 1894 and 1900, often installing or designing the exhibition himself. His influential "The Art and Craft of the Machine," a talk presented to the Arts and Crafts Society, was published as the introduction to the Club's 1901 exhibition catalogue, and the next year he was permitted his own gallery to exhibit sixty-five drawings, thirty-six of which were illustrated in the catalogue.



Frank Lloyd Wright exhibition, Chicago Arts Club, the Art Institute of Chicago, 1907, showing metal office furniture from the Larkin Administration Building (Buffalo, New York, 1906; demolished 1950), an example of his art glass lighting, and a series of architectural plans and presentation renderings.
Photograph by Henry Fuermann and Sons, courtesy of the Frank Lloyd Wright Archives (Museum of Modern Art/Avery Architectural and Fine Arts Library, Columbia University, New York), 0700.0006.

Wright coordinated a solo exhibition, *The Work of Frank Lloyd Wright*, through the club in 1902. Sixty-four items represented work of the previous two years, and Wright's work illustrated fourteen pages of the accompanying catalogue. The Club again featured Wright's work with thirty-eight designs from 1904 to 1907, among them **Unity Temple**. **Taliesin** was part of the 1914 exhibition with his architectural designs displayed as *The Work of Frank Lloyd Wright Done since the Spring of 1911*.

In the 1920s, Wright's work was shown alongside his international contemporaries, with the **Robie House** representing him at the *Ausstellung Internationaler Architekten (Exhibition of International Architects)* organized by Walter Gropius in Weimar, Germany, at the Bauhaus (1923), and in a German Werkbund exhibition curated by Friedrich Kiesler (1927) held in Stuttgart. The Stuttgart exhibition, *Internationale Plan—Und Modellausstellung Neuer Baukunst (International Exhibition of Modern Architecture: Designs and Models) was part of the Werkbund's larger Die Wohnung (The Dwelling)* exhibition, focusing on modern housing solutions.

Frank Lloyd Wright at 150: Unpacking the Archives *exhibition at the Museum of Modern Art, New York City, 2017. The exhibition was part of a year-long celebration of the life and work of Frank Lloyd Wright during what would have been his 150th birthday.*
Photograph by Patti McConville, Alamy Stock Photo.

Wright exhibited and lectured at the Art Institute of Chicago, at Princeton University, and at the Architectural League of New York in 1930. A year later, a large exhibition of his architecture traveled through Europe, moving critical debate beyond Holland and Germany. *The Work of Frank Lloyd Wright, 1893-1930* provided an important reference point for his German audience and for architects and critics in other countries even though it had originated in the United States at the Wisconsin Historical Library in Madison, a short distance from Wright's home at **Taliesin**. The exhibition then went to the Architectural League of New York, the Art Institute of Chicago, Princeton University, the University of Washington, and the University of Oregon before traveling to Europe where it appeared in Amsterdam, Berlin, Frankfurt, Stuttgart, Antwerp, Brussels, and Rotterdam under variations of the title "Frank Lloyd Wright, Architect."

The first European venue of this 1931 international exhibition was the Stedelijk Museum in Amsterdam. Wijdeveld, the publisher of Wright's works in the journal *Wendingen* and collator of his *Life-Work* monograph, organized the exhibition, and documented the critical reactions to the exhibition in Holland and subsequent European venues by making a beautiful scrapbook for Wright. After Amsterdam the exhibition went to the Prussian Academy of Fine Arts in Berlin. In contrast to Wright's first visit in 1909 when he arrived virtually unknown in Germany, Wright's architecture received both public recognition and critical notice. Most found a spiritual quality of Wright's architecture permeating every detail of the plans, sections, and elevations of his buildings.

During the tour Wright's work occupied an international stage, culminating in his inclusion in the Museum of Modern Art's 1932 *Modern Architecture: International Exhibition*, the introduction to America of the International Style. Wright provided a list of over 180 executed buildings and projects for the checklist, representing the years 1887 to 1930 taking up seven pages of the accompanying catalogue and included images of **Robie House** and **Taliesin**. While his contemporaries Walter Gropius, Le Corbusier, J.J.P. Oud, Mies van der Rohe, and Richard Neutra contributed similar (albeit shorter) resumes of their work, their designs ultimately provided context for, if not direct comparisons to, Wright's submissions: the Weissenhofsiedlung in Stuttgart (Corbusier, Mies van der Rohe, and Oud), Villa Savoye (Corbusier), the German Pavilion in Barcelona (Mies van der Rohe), Tugendhat House (Mies van der Rohe), and Lovell House (Neutra). Following its Museum of Modern Art debut, *Modern Architecture: International Exhibition* continued to the Pennsylvania Museum of Art (now the Philadelphia Museum of Art) in Philadelphia; Buffalo Fine Arts Academy (now the Albright-Knox) in Buffalo; the Cleveland Museum of Art, as well as the Sears Roebuck and Bullocks Wilshire Department Stores in Chicago and Los Angeles respectively—blurring the boundaries of museum and department store through the presentation of modern architecture as a consumer commodity.

Wright's utopian plan known as Broadacre City was extensively exhibited during the mid-1930s as a means of promoting his urban planning concepts, especially how affordable housing would allow a family of average means the opportunity to live in a house tailored to their needs (i.e. not one designed for a collective society). The 13.5m² model was shown at Rockefeller Center in New York City as part of the 1935 International Arts Exposition, one of eight models Wright supplied for the show. From there, the Broadacre City model was shown at the State Historical Library in Madison Wisconsin; Kaufmann's Department Store in Pittsburgh; the Corcoran Gallery in Washington, DC; and the Southwestern Wisconsin Fair near Taliesin—each venue attracting the attention of critics and admirers who marveled at Wright's post-Depression plan for American life.

The Museum of Modern Art (MoMA) played a prominent role in disseminating Wright's designs on an international scale. A tribute to **Fallingwater**, *A New House on Bear Run, Pennsylvania, by Frank Lloyd Wright* featured photographs by the Hedrich-Blessing firm, Luke Swank, and the exhibition's curator, John McAndrew. McAndrew especially championed Wright, and along with curator Elizabeth Bauer Mock (one of Wright's first apprentices at the Taliesin Fellow-

ship) showcased the architect in their exhibition *Trois Siècles d'art aux Etats-Unis* in Paris in 1938, and again a year later in the revamped Three Centuries of American Architecture that included a model of **Robie House**. **Robie House** and the **Herbert and Katherine Jacobs House** were part of MoMA's tenth-anniversary exhibition *Art in Our Time* as part of the "Houses and Housing" section. In 1940, McAndrew, Mock, and Wright co-curated a retrospective, *Frank Lloyd Wright: American Architect*, which was the architect's first solo exhibition in that museum and became the standard-bearer for similar exhibitions in the following decades. Mock then included Wright's work in *The Wooden House in America* (1941) that toured to twenty-two venues; *Built in USA: 1932-1942* (1944) that toured to sixteen venues featuring **Fallingwater**, and with **Taliesin West** on the checklist; *Tomorrow's Small House: Models and Plans* (1945); and *If You Want to Build a House* (1946), which toured twenty-four venues. Edgar J. Kaufmann, jr., whose father had commissioned **Fallingwater** from Wright in 1935 and who had joined the staff at MoMA, curated *Modern Rooms of the Last Fifty Years* (1946-1947) that in turn toured fifty venues. Phillip Johnson, who had curated the museum's 1932 *Modern Architecture: International Exhibition*, celebrated individual projects by Wright with *Taliesin and Taliesin West* (1947).

Later exhibitions continued to play a significant role in bringing his work to large audiences but also attempted to encapsulate the last decade of Wright's life, his most prolific. *Sixty Years of Living Architecture*, which opened at Gimbel's Department Store in Philadelphia in April 1951, was the last great international exhibition during Wright's lifetime and the largest exhibition of his career. The chief organizer for the event was Oskar Stonorov, a German-born architect living in Philadelphia who was committed to a socially responsible architecture. The exhibition then began an international odyssey, heading first to the Palazzo Strozzi in Florence. At its next stop in Zurich, the natural contact person was Werner Moser, who not only mounted the exhibition but also produced a German-English catalogue.

Subsequently the exhibition traveled to Paris, Munich, and Rotterdam. In 1953 it returned to the United States, where it opened in New York City on the proposed site of the **Guggenheim Museum**, and then continued to Mexico City. In 1954 it was shown at **Hollyhock House** in Los Angeles, and returned finally to **Taliesin**. The exhibition was reprised on a smaller scale in 1956 in Chicago in conjunction with the City's proclamation of October 16 as Frank Lloyd Wright Day. Combined with his last comments on organic architecture and his final book, *A Testament*, this global demonstration of a lifetime devoted to architecture provides the background for seeing how the themes of Wright's modernism played out.

Exhibitions in the United States and around the world after Wright's death in 1959 bring the influence of his architecture up to the present. Although often informative, for the most part these exhibitions have focused on a certain time period or location, a narrow group of projects, or specifics like decorative arts or original materials. The lone exception was *Frank Lloyd Wright, Architect*, held at the Museum of Modern Art in New York from February through May 1994. The exhibition did not travel, but an international group of scholars presented at a symposium held at the museum in conjunction with that exhibition, cosponsored by the Society of Architectural Historians.

In recent years, comprehensive exhibitions have been organized around Wright's architecture. These include *Frank Lloyd Wright—Retrospective* (various venues in Japan, 1991); *Frank Lloyd Wright: Architect* (Museum of Modern Art, 1994); *Frank Lloyd Wright: Design for the American Landscape* (Canadian Centre for Architecture, and four venues in the United States, 1996); *Frank Lloyd Wright and Japan* (various venues in Japan, 1997); *Frank Lloyd Wright and the Living City* (Vitra Design Museum, and various venues in Mexico and Europe, 1997-2003); *Light Screens: The Leaded Glass of Frank Lloyd Wright* (various United States venues, 2001-2003); *Frank Lloyd Wright: Renewing the Legacy* (Carnegie Museum of Art, 2005); *Frank Lloyd Wright and the House Beautiful* (various United States venues, 2005-2007); *Architecture of the Guggenheim* (various European venues, 2006); *Frank Lloyd Wright: From Within Outward* (Solomon R. Guggenheim Museums in New York City and Bilbao, 2009); *Frank Lloyd Wright: Organic Architecture for the Twenty-first Century* (Milwaukee Art Museum, 2011); and, to commemorate his sesquicentennial, *Frank Lloyd Wright at 150* (Museum of Modern Art, 2017).

The Influence of Wright's Work through Publications

The architecture of Frank Lloyd Wright has attracted the scholarly focus of leading historians and critics of American architecture, culture, and urbanism beginning with Lewis Mumford, Fiske Kimball, and Thomas Tallmadge in the 1920s and including Henry-Russell Hitchcock, Frederick Gutheim, Vincent Scully, William Jordy, H. Allen Brooks, Norris Kelly Smith, and Ada Louise Huxtable during the mid-twentieth century. Since the early 1970s, the ranks of distinguished scholars have grown to include Anthony Alofsin, Hilary Ballon, Richard Cleary, Joseph Connors, William Cronon, David De Long, Robert Fishman, Kenneth Frampton, Grant Hildebrand, Neil Levine, Jack Quinan, Sidney Robinson, Joseph Siry, Kathryn Smith, Paul Turner, Robert Twombly, and Gwendolyn Wright.

Wright's work has also attracted the study of many prominent foreign scholars including: Donald Leslie Johnson (Australia); Peter Collins (Canada); Jean Castex and Jean-Louis Cohen (France); Peter Goessel, Jürgen Joedicke, Gabriele Leuthäuser, and Daniel Treiber (Germany); Nikolaus Pevsner (Germany, United Kingdom); Leonardo Benevolo, Giorgio Ciucci, Francesco Dal Co, and Bruno

Zevi (Italy); Yukio Futagawa and Masami Tanagawa (Japan); Eduardo Sacriste (Spain); Sigfried Giedion (Switzerland); and Reyner Banham, Martin Pawley, and John Sergeant (United Kingdom). Publications, while primarily printed in English, have been translated or published in Catalan, Dutch, Flemish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Spanish, and many more languages.

The Chicago Architectural Club exhibition catalogues discussed above were among the earliest publications to feature Wright's work. Wright's 1908 battle cry, "In the Cause of Architecture," published in *Architectural Record*, promoted his new way of thinking, especially using the prairie as inspiration. "The prairie has a beauty of its own, and we should recognize and accentuate this natural beauty, its quiet level," he wrote. "Hence, gently sloping roofs, low proportions, quiet skylines, suppressed heavyset chimneys and sheltering overhangs, low terraces and outreaching walls sequestering private gardens." Embodied in his design for Frederick C. Robie, these characteristics fulfilled Wright's organic philosophy and made the **Robie House** (1908) the most clearly expressed of his Prairie house designs.

Members of the Eighteen also assisted in promoting Wright's work, both at the local and national level and were responsible for much of his early recognition. Robert Spencer did the most to promote Wright, with "The Work of Frank Lloyd Wright" published in the *Architectural Review* (1900). It remained the most lengthy and comprehensive account of Wright's work until his own "In the Cause of Architecture" was published in the *Architectural Record* eight years later, with fifty-six pages of photographs, many with informative captions. The *Review* received only moderate attention across the Atlantic Ocean while the *Record* enjoyed wide distribution in Europe and helped usher in his ideas to an overseas audience.

Articles by Spencer covered Wright and his colleagues in the *Brickbuilder* (1903 and 1904), and in over twenty articles in *House Beautiful*, a household monthly, between the years 1905 and 1909. Wright's work was published, without comment, in the Chicago publication *Inland Architect and News Record* regularly during the 1890s, yet it was a profusely illustrated December 1896 article by Alfred Granger on Wright's studio in Oak Park for *House Beautiful* that emphasized the skill with which Wright had embodied the ideals of the Arts and Crafts Movement in his architecture and in the decoration of his own home.

Unity Temple and the **Robie House** were two of a series of works represented in *Ausgeführte Bauten und Entwürfe von Frank Lloyd Wright* (1910), a two-folio monograph of Wright's buildings and designs, many in color; and the similarly titled *Frank Lloyd Wright: Ausgeführte Bauten* (1911), a small photograph book of executed work—a special issue commonly known as a *sonderheft*—both published in Berlin by the Wasmuth Verlag. The 1908 "In the Cause of Architecture" was translated into German and Ashbee contributed the introduction, writing "It is significant that from Chicago, quite independently of England, of France, of Germany or elsewhere, here is a voice calling, offering a solution."

Wright worked on the initial portfolio in Fiesole, Italy, having abandoned family and practice to focus on it. Kuno Francke, the German-born Harvard professor of German history and culture, had visited Wright in Oak Park in 1908, staying for two days in his home and studio. The meeting is thought to have been the impetus for the publications as, soon after Francke's return to Berlin Wright received a proposal from Ernst Wasmuth to publish a complete monograph of his work.

The 1910 portfolio, the first by Wasmuth to feature neither a German nor Austrian architect, was published with a limited distribution of one hundred copies in Europe and nine hundred copies in the United States, and had a demonstrable impact on European architects. Otto Wagner shared a copy of the monograph with his students in Vienna in 1911 and proclaimed Wright worthy of study. Although Le Corbusier would later deny that he knew of Wright at the time, he had obtained a copy of the *sonderheft* for his mentor Auguste Perret in 1915. Others who saw the publications, including the young Austrians Rudolph Schindler and Richard Neutra, would come to work for Wright in the late 1910s and 1920s.

Yet it was Bruno Möhring, who visited Oak Park in 1904, who lectured on Wright's work and showed a small selection of drawings one evening in February 1910 to an architectural club, the Union of Berlin Architects. Decades later, Ludwig Mies van der Rohe recalled this as an "exhibition," but this lecture is the only documented showing of Wright's work in Germany at that time. Mies van der Rohe recalled in 1940 that "This comprehensive display and the extensive publication of his works enabled us really to be acquainted with the achievement of [Wright]. The encounter was destined to prove of great significance to the development of architecture in Europe." He continued: "The work of this great master revealed an architectural world of unexpected force and clarity of language, and also a disconcerting richness of form. Here finally was a master-builder drawing upon the veritable fountainhead of architecture, who with true originality lifted his architectural creations into the light. Here again, at last, genuine organic architecture flowered."

On a smaller scale, Europeans learned about Wright through other publications, setting the stage for his influence. One unexpected source was *Volné Směry*, the avant-garde Czech journal published in Prague. Its editors included Jan Kotěra, a former student of Wagner's and a young leader of the Czech modern movement. In 1900, the journal featured an article on architecture in the United States

reporting that Louis Sullivan was the emerging modernist. The essay did not mention Wright by name, but did include two images of the studio addition to his Oak Park home reproduced from the *Architectural Record*, perhaps the first images of Wright's work to appear anywhere in Europe.

As Anthony Alofsin has chronicled, German architect Erich Mendelsohn became Wright's most distinguished architectural connection to Europe in the mid-1920s. Their meeting reawakened interest in Wright in Germany and made Wright more aware of European developments. Mendelsohn published an early appraisal of Wright in the German journal *Architectura* in 1925 which he described the "intimate angularity and abstraction of Wright's work as a synthesis of expressionist tendencies." Subsequent articles drew additional visitors and stimulated a new round of publications, among them two influential books—one by the Dutch architect and editor Hendricus Theodorus Wijdeveld and the other by the German architect and writer Heinreich de Fries.

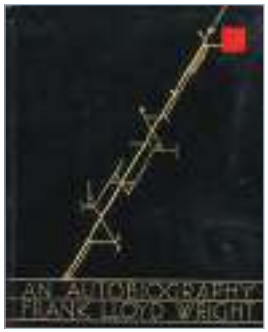
Thus Wright saw his designs published in Europe often long before they appeared in the United States. As a result, European modernists saw a new version of Wright's modernism, while Americans relied on memories from the Prairie period, if anything. Wijdeveld's major Dutch publication came out in 1925 as *The Life-Work of the American Architect Frank Lloyd Wright*. It consisted of most of the articles that had appeared in seven consecutive special issues of the journal *Wendingen*, illustrated with over two hundred drawings and photographs, among them **Unity Temple**, the **Robie House**, **Hollyhock House**, and **Taliesin**. The book marked a high point of interest in Wright's architecture with contributions by Wijdeveld, Berlage, Mendelsohn, Jacobus Johannes Pieter Oud, Robert Mallet-Stevens, and critic Lewis Mumford accompanying Wright's "To My European Co-Workers" and the series of his "In the Cause of Architecture" essays.

In Germany, meanwhile, Wright was continuing to make his work known in exhibitions and publications. Walter Gropius had included photographs of Wright's **Frederick C. Robie House** in an exhibition of international architects held at the Bauhaus in Weimar in 1923, five years before he made his first trip to see Wright's work in person. In 1927, Friedrich Kiesler included the Alice Millard House in an exhibition sponsored by the German Werkbund in Stuttgart. Heinrich de Fries's *Frank Lloyd Wright: Aus dem Lebenswerke eines Architekten* (1926) attempted to show that Wright's opening of interior spaces made him modern. He also assessed Wright's recent work, illustrating the book with examples of his designs recently completed in Japan and California. Judging Wright to be a socially conscious architect like the European modernists, concerned with problems of minimum human requirements, de Fries also described him as an architect of nature, whose preoccupation with space, plants, and water led to a

Cover, *Frank Lloyd Wright, The Disappearing City*, published by William Farquhar Payson, New York, New York, 1932. Courtesy of Douglas M. Steiner, Edmonds, Washington.

Cover, *Frank Lloyd Wright, The Future of Architecture*, published by Horizon Press, New York, New York, 1953. Courtesy of Douglas M. Steiner, Edmonds, Washington.

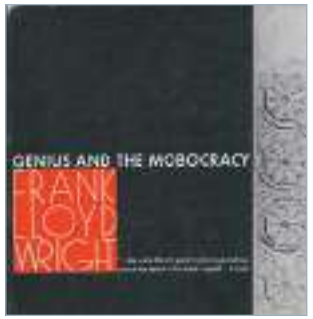
Cover, "Frank Lloyd Wright," *The Architectural Forum*, January 1948. Courtesy of Douglas M. Steiner, Edmonds, Washington.



Cover, "Frank Lloyd Wright: His Contribution to the Beauty of American Life," *House Beautiful*, November 1955. Courtesy of the Western Pennsylvania Conservancy.

Cover, *Frank Lloyd Wright, An Autobiography*, published by Longmans, Green and Company, New York, New York, 1932. Courtesy of Douglas M. Steiner, Edmonds, Washington.

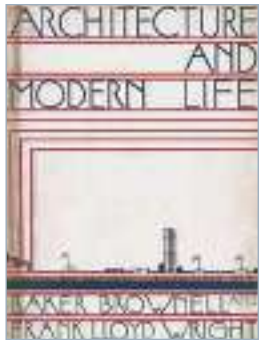
Cover, *Wendingen* volume 4, issue 4, 1925. Courtesy of Douglas M. Steiner, Edmonds, Washington.



Cover, "L'ultimo incontro con Frank Lloyd Wright," *Casabella*, issue 227, May 1959. Courtesy of the Western Pennsylvania Conservancy.

Cover, "House of the Century: Since 1957 No House Has Had More Influence," *House and Home*, May 1957. Courtesy of Douglas M. Steiner, Edmonds, Washington.

Cover, *Frank Lloyd Wright, Genius and the Mobocracy*, published by Horizon Press, New York, New York, 1949. Courtesy of Douglas M. Steiner, Edmonds, Washington.



Cover, *Frank Lloyd Wright: 60 Jahre Architektur*, published by Veranstelter, Haus der Kunst, Munich, 1952. Courtesy of Douglas M. Steiner, Edmonds, Washington.

Cover, *Baker Brownell and Frank Lloyd Wright, Architecture and Modern Life*, published by Harper and Brothers, New York, New York, 1937. Courtesy of Douglas M. Steiner, Edmonds, Washington.

Cover, *The Life Work of the American Architect Frank Lloyd Wright*, published by C.A. Mees, Santpoort, Holland, 1948. Courtesy of Douglas M. Steiner, Edmonds, Washington.

higher spiritual goal. One review appearing in *Die Frankfurter Zeitung* in December, 1926, was proof that the debate about Wright had expanded from the architectural press to the daily newspapers. It was penned by Grete Dexel, the wife of art critic Walter Dexel, who declared: "We all know that Frank Lloyd Wright has decisively influenced the European building of today. Some of his country houses (villas) and ground plans are found in every book on new architecture and shown to us in every pertinent lecture."

Alofsin also focused on the views of Adolf Behne, a German art historian and commentator whose *Der modern Zweckbau* (1926) noted that Wright made two contributions. First was a plan of interior spaces based upon functional considerations of comfort, quiet, and clarity. Second was an emphasis on horizontality of form, which made Wright's houses appear a part of the streets on which they were situated. According to Behne, Wright provided the first real breakthrough toward a *sachlich*, or objective, plan and he also noted the architects whom he felt were influenced by Wright: in Germany, Peter Behrens, Gropius, Mendelsohn, and Mies van der Rohe; in Holland, Oud, Wils, Robert van 't Hoff, and Willem Greve; and in Switzerland, Le Corbusier. The influences affected the architects' designs of elevations more than floor plans in part because Wright's floor plans had only recently become understood.

According to Jennifer Tobias, who launched an exhibition of print publications by Wright for the Museum of Modern Art, Wright was encouraged from childhood to believe in his individuality and genius, and publications by and about him helped to fulfill that prophecy. From the beginning to the end of his long career, Wright leveraged publishing to formulate his ideas, build a recognizable persona, and stay in the public eye. These include his own story, *An Autobiography* (1932; 1943), as well as self-published tracts and newsletters through the Taliesin Fellowship, such as "Taliesin Square Paper" and "Taliesin," which served to promote his organic philosophy through the lens of contemporary society, politics, and literature.

Publications by Wright or those featuring Wright's work influenced the Australian architect Glenn Murcutt, whose father brought him overseas journals featuring Wright, Mies van der Rohe, and Charles and Ray Eames. A self-described "Thoreauvian and Wrightian architect," Murcutt cited Wright's theory of organic architecture as having an enormous influence on him. English architect Norman Foster acknowledged the debt owed to his public library, where he discovered Wright as a teenager and how his "home on the prairie" differed from his own. Gordon Bunshaft, the American architect, saw in Wright's early publications the decorative touch of the Viennese School, and that "what he influenced was the open plan of the house. That was his contribution. That had a great influence

in Europe. If it hadn't been for that open plan, I wonder if Mies van der Rohe would've done the Tugendhat House."

In 1940, Henry-Russell Hitchcock, Jr. penned "Wright's Influence Abroad," for *Parnassus* which placed Wright's work within a context of his twentieth-century contemporaries. "If America in the twentieth century is no longer architecturally in debt to Europe, the credit is predominantly due to one man and one man alone, Frank Lloyd Wright." Hitchcock remarks that the 1910 Wasmuth portfolio was avidly studied abroad and that these executed and buildings and projects of Wright's first great period were made available to Europe at a time when a general stirring in architecture made their appreciation and understanding both possible and profitable."

Dutch architectural historian Herman van Bergeijk has detailed the influence of Wright on van 't Hoff, and the striking similarities on the latter's work after World War I, as has the Swiss critic Sigfried Giedion in *Space, Time, and Archietcture* (1941). Similarly, Italian critic Bruno Zevi posited the importance of van 't Hoff's admiration of Wright in the development of modern Dutch architecture in his *Storia dell'architettura moderna* (1950), saying the "volumetric disposition" of van 't Hoff's two Wrightian houses were significant when compared to the Prairie houses.

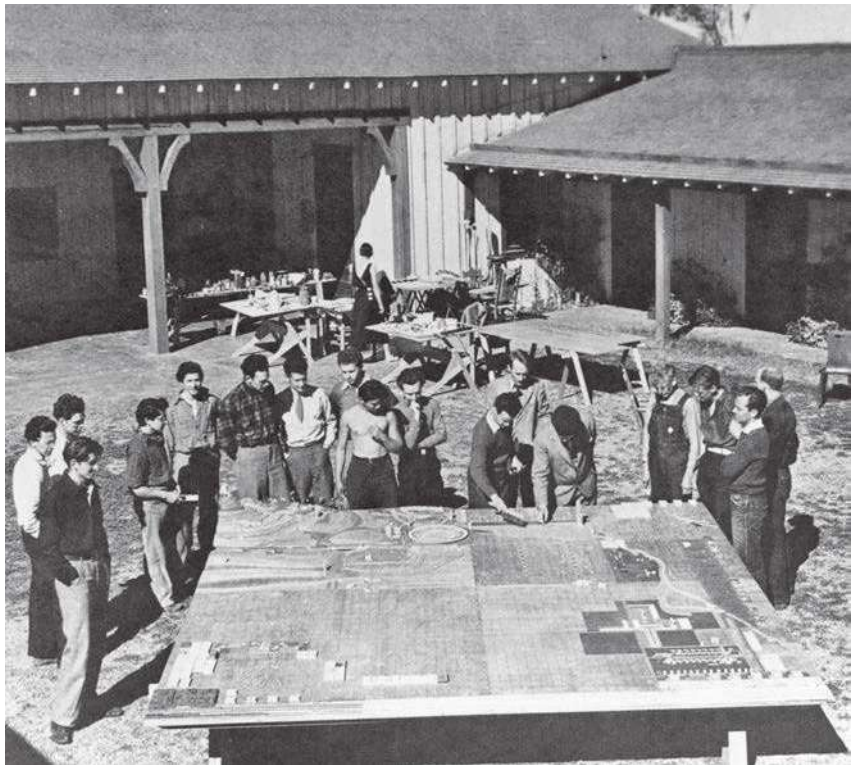
Philip Johnson penned an essay for *Architectural Review* in August 1949, acknowledging Wright as "the founder of modern architecture as we know it in the West, the originator of so many styles that his emulators are invariably a decade or so behind." The piece was all the more important as it was written while Wright was still living and had a decade more of designing and building remaining in his career. Johnson continued: "There can be no disagreement, however, that he is the most influential architect of our century. In the 1900s he originated the Prairie house, with its open plan, which through the Wasmuth publication of 1910 became the prototype of so much modern design. In the 1920s he outdid the massiveness of the Maya with a new kind of ferro-concrete structure [Hollyhock House]. In the 1930s and 1940s he has been and still is inventing new shapes: using circles, hexagons, and triangles to articulate space in new ways."

Wright's list of important writings include: *The Disappearing City* (1932), *An Organic Architecture: The Architecture of Democracy* (1939), *On Architecture* (1940), *When Democracy Builds* (1945), *Genius and the Mobocracy* (1949), *The Future of Architecture* (1953), *The Natural House* (1954), and *The Living City* (1958). Each addressed particular aspects of his architectural philosophy using drawings and photographs to illustrate concepts of organicism. The select bibliography found on pages 348-359 also supports the influence Wright's architecture had on scholars, critics, and even his clients, with numerous publications released annually, even to this day.

An important phase of Taliesin training was the making of models of buildings designed by Wright, like the one built in 1945 of the Solomon R. Guggenheim Museum. In a separate room off their drafting studio, Taliesin apprentices use plastics, plywood, and other materials to construct scale models of their projects. At work here are (left to right): Burton Goodrich, John de Koven Hill, Douglas Lockwood, Beatrice Reik, and Lee Kawahara.
Photograph by Acme Roto Service, courtesy of Eric O'Malley/OAD Archives.

The Influence of Wright on Studio Associates and Apprentices

In Australia, Walter Burley Griffin and Marion Mahony Griffin were Wright's most important ambassadors during the early twentieth century, having worked with Wright in his Oak Park studio where they were immersed in his Prairie aesthetic before developing their own personal styles with Wrightian motifs. The couple moved to Canberra to complete a competition design for the capital city (1913) and later Castlecrag (1921), a community north of Sydney based on unique Australian flora and topography. Like the Prairie houses they learned from, Castlecrag exhibited a oneness with its site and is thought to be the "first statement of architecture inspired and derived by Australia."



Broadacre City model in fabrication by Taliesin apprentices at La Hacienda, Chandler, Arizona, 1935, with Frank Lloyd Wright, at right in beret, adjusting the model.

Photograph courtesy of the Frank Lloyd Wright Archives (Museum of Modern Art/Avery Architectural and Fine Arts Library, Columbia University, New York), 3402.0084.

Czech Antonin Raymond, who went to work for Wright in 1916, had studied under Jan Kotěra, who held a position at the Technical College of Prague training a generation of modern architects much as Otto Wagner had in Vienna. In 1919, Raymond joined a team of a dozen associates as Wright worked on the Imperial Hotel in Tokyo, remaining in Japan to establish his own office in 1920. This first generation of Wright's apprentices included Arata Endo, Kameki Tsuchiura, and Yoshiya Tanoue, each of whom eventually created their own masterpieces as well as mentoring subsequent generations of Japanese architects. Endo, like Raymond, spent time at Taliesin, working on projects including the Jiyu Gakuen School (1922) and the Tazaemon Yamamura House (1922) which he assisted in completing after Wright returned to the United States. Tsuchiura worked with Wright in both Los Angeles and at **Taliesin**, returning to Tokyo in 1926 to pursue a practice in the Wright idiom. Tanoue opened his office in Sapporo in 1924, incorporating Wrightian influences and adapting the organic ideals in "snow country" houses.

The Austrian Rudolph Schindler worked for Wright from 1918 through 1921. In December 1919, while in Japan, Wright dispatched Schindler to California to oversee his practice there and to supervise the construction of **Hollyhock House**. After Schindler's departure from Taliesin, his Austrian friend, Richard Neutra, arrived in 1922. Neutra knew of Wright's work through the Wasmuth folios, which he had seen in Vienna. In 1923, Werner M. Moser, a member of a famous family of Swiss architects, came to work for Wright at **Taliesin**; upon his return to Switzerland five years later he became a founding member of the Congrès Internationaux d'Architecture Moderne (CIAM).

Wright's Wisconsin studio often took on the air of an extended family of international architects and their spouses. In July 1924, Wright entertained Richard and Dione Neutra, Werner and Sylvia Moser, and Kameki Tsuchiura and his wife Nobu, from Japan. This soirée, captured in a photograph in the Taliesin living room (see page 147), preceded the Neutras' move to **Taliesin** that October and the subsequent arrival of Erich Mendelsohn, for whom Neutra had worked in 1921 to 1922. Despite the prior arrival of all these young Europeans, Wright welcomed Mendelsohn as "the first European to come and seek him out and truly find him." Indeed, Mendelsohn, who had learned of Wright from Neutra, was the first famous German architect to meet the master, having recently completed his Einstein Tower in Potsdam (1921).

The 1932 publication of *An Autobiography* also sparked an interest in Frank Lloyd Wright among young architects, who were entranced by Wright's principles of organic architecture. Students enrolled in the Taliesin Fellowship, often leaving programs at prominent institutions like Carnegie Institute of Technology (now Carnegie Mellon University), Columbia University, the École nationale supérieure des Beaux-Arts, the Massachusetts Institute of Technology, McGill University, the University of Chicago, and Vassar and Wellesley Colleges. Apprentices who joined the Taliesin fellowship came from numerous countries, attesting to the reach of Wright's designs and publications. In the decades prior to his death in 1959, Frank Lloyd Wright apprenticed nearly 500 young men and women from Argentina, Austria, Belgium, Canada, Chile, China, Colombia, Croatia, Denmark, the Dominican Republic, Egypt, England, France, Germany, Greece, India, Iran, Ireland, Italy, Japan, Malaysia, Netherlands, Peru, Philippines, Poland, Russia, Sri Lanka, Sweden, Switzerland, Turkey, the United States, and Venezuela—many of whom returned to their home countries to practice.

Among the most notable were:

- E.P. Abeywardene (1947-1949, Sri Lanka) who opened a private practice in Colombo.
- Elizabeth Bauer Mock Kassler (1932-1933; 1948-1949, United States) who was curator at the Museum of Modern Art for a decade before joining the faculty at the University of Oklahoma under its director, architect Bruce Goff.
- Curtis Besinger (1939-1943; 1946-55, United States) who became dean of architecture at the University of Kentucky.
- Raku Endo (1957-1958, Japan), son of Arata Endo, who worked in his father's office before moving to Taliesin in 1957, the last Japanese apprentice to share the drafting room with Wright. Returning to Japan, he attracted clients interested in a Wrightian aesthetic, designing over 250 residences.
- Aaron Green (1939-1943, United States), who worked in the office of industrial designer Raymond Loewy before serving as Wright's representative for his West Coast projects.
- John de Koven Hill (1937-1953, United States) who was architecture editor and editorial director for the influential *House Beautiful* magazine from 1953-1964.
- Heinrich Klumb (1929-1933, Germany) who, as chief architect of public works in Puerto Rico, oversaw the University of Puerto Rico master plan from 1946-1966, and later founded the ARKLU furniture factory.
- Euine Fay Jones (1953, United States), the only of Wright's apprentices to receive the American Institute of Architecture's Gold Medal award. Jones returned to his home state of Arkansas to design Thorncrown Chapel in Eureka Springs (1980), and it is for him that the University of Architecture's School of Architecture is named.
- John Lautner (1933-1939, United States) who became an influential southern California architect known for his mid-century space-age flair.
- Marya de Czarnecka Lilien (1936-1937, Poland) who returned to Poland and then immigrated to Chicago where she taught at the School of the Art Institute of Chicago for twenty-five years.
- Werner Max Moser (Switzerland), who studied briefly with Wright and designed the Indian Institute of Technology Kharagpur as well as cofounding the Congrès Internationaux d'Architecture Modern (CIAM).
- William Wesley Peters (1932-1959, United States) who was the first apprentice to join the Taliesin Fellowship and who served as president of Taliesin Associated Architects where he was instrumental is realizing the "Pearl Palace" near Karaj, Iran in the 1970s.
- Ling Po (1946-1959, China) who learned of Wright as a student of architecture at Central University in Chungking and became best known for his pattern design and architectural renderings while in Wright's studio.
- Mansanhji Rana (1947-1950, India) who became chief architect of New Dehli.
- Gira and Gautam Sarabhai (1946, India), a sister and brother for whose family Wright designed the Sarabhai Calico Mills Store in 1945.
- Paolo Soleri (1947-1948, Italy) who founded the Cosanti Foundaiton for architecture in 1956 and the Arcosanti design-build community in Arizona in 1970.
- Edgar Tafel (1932-1941, United States) who became an influential architect and champion of preserving Wright's architectural legacy.

Wright's Architecture as Influence

Architectural historian Andrew Saint has studied the influence of Wright on British architects and critics, including Charles Robert Ashbee, Wright's first British promoter and friend. Ashbee had advocated that architecture represent the collective, while Wright argued for the individual. That difference strained their friendship even in 1910, when Wright, virtually unknown in Great Britain, briefly visited that country for the first time. By the time of his next visit, in 1939, where he delivered lectures at the Sulgrave Manor Board in London, he was a distinguished figure, and his Prairie period designs, at least, had become common currency.

Like Ashbee, the eminent Jugendstil architect and city planner Bruno Möhring was intrigued by the designs emanating from Chicago, especially the first generation of steel-skeleton skyscrapers that had been sprouting up across its skyline. Möhring visited Wright's Oak Park studio in 1904 and while he and Wright never met (Wright was away from his office), the visit laid the foundation for a meeting a few years later when Wright made his first trip to Europe. The Oak Park studio that Möhring visited would have counted among its associates Walter Burley Griffin, Marion Mahony (who married Griffin in 1911), William Drummond, Isabel Roberts, Francis "Barry" Byrne, and Charles E. White. They united with Wright in their reverence for the natural world and shared Wright's desire to create a new, democratic architecture, filling the studio with lively critiques of each other's' work and the art, architecture, and politics of the day. The Oak Park studio was active between 1898 and 1909, and represented a highly prolific period in Wright's career. More than one-third of his life's work was designed there,

including major buildings of the Prairie style: The Darwin D. Martin House (1903), Larkin Administration Building (1904), **Unity Temple** (1904), and the **Frederick C. Robie House** (1910).

As Frank Lloyd Wright's reputation grew, so did his roster of important clients in the Chicago area who wished to work with a progressive architect. Among them were Ward Willits, president of a brass foundry that employed Orlando Giannini, the artist Wright hired to paint murals in his own Oak Park house. The house Wright designed for Willits in 1901 represents a radical step forward in his design maturity and is thought to be his first Prairie design, the culmination of his previous years' fascination with nature. Closely related to the house he proposed as "A Home in a Prairie Town" for the *Ladies' Home Journal* (1901), the Willits House's cross-axial plan allowed for nature to penetrate the interior with varying ceiling heights and floor levels used to denote dedicated spaces within each wing. With Willits, Wright traveled to Japan for five weeks in 1905, an excursion that began a lifelong affinity for collecting Japanese woodblock prints.

Far more significant, posits Anthony Alofsin, was the dissemination of Wright's ideas through Dutch architects in the 1910s. Hendrik Petrus Berlage, Wright's first and most important champion and a major pioneer of the Dutch modern movement, visited America in 1911 and saw several of Wright's buildings, particularly in Chicago and Buffalo, but missed meeting the architect. Berlage later gave three lectures with lantern slides in Zurich about his tour of American architecture, in which Wright's designs figured prominently. Due to their success, the lectures were each published in Dutch and German-language Swiss publications. This stimulated the interest of young Europeans in establishing a connection between Wright and Holland and sensitizing Swiss architects and engineers to Wright's ideas. Like Wagner, Berlage shared his personal copy of Wright's Wasmuth folios with his protégés, among them Jan Wils, who learned presentation techniques by copying the folio's rendered trees and perspectives.

Following the publication of the Wasmuth portfolios, Wright extended his European stay to tour Bavaria, Vienna, Paris, and London. In Berlin, he met Möhring and attended a lecture by him on American architecture, but otherwise did not or was unable to meet his other European contemporaries. Wright returned to the United States in 1911 and undertook the design and construction of **Taliesin**, where he created a new home and studio arrangement, hiring associates and carpenters to help him complete the house.

While the Dutch initiated the critical discourse about Wright in the 1910s, it would not be until the 1920s that his work and ideas would play an important role in German debates about modernism. In the intervening years, a series of young European architects sought Wright out, with many eventually working with him in Wisconsin. Though commissions were few, they provided opportunities for Wright to provide a working environment charged with the inspiration provided by extended travel. In mid-1914, the young Dutch architect Robert van 't Hoff made a pilgrimage to **Taliesin** via Chicago, intrigued after receiving the Wasmuth *sonderheft* from his father. Having completed his architectural studies in England, he was familiar with Ashbee's promotion of Wright, and it led him to see in "reality what Wright had built"—**Unity Temple**, his suburban Chicago houses, and **Taliesin** among them. When he returned home with a collection of documents on Wright's work, many unpublished in Europe, he designed a pair of villas derived from Wright works at Huis ter Heide for businessmen A.B. Henny and J.M. Verloop, both completed in 1915.

The German Ernst Neufert made the journey to **Taliesin** in 1936, followed by Mies van der Rohe in 1937, who later was quoted as saying, "In his undiminishing power [Wright] resembles a giant tree in a wide landscape which year after year attains a more noble crown." Eero Saarinen, son of the equally famous Finnish architect Eliel Saarinen, proclaimed in the late 1950s that Wright's influence "is, and should be, not through the form itself but through the philosophy…I think it may well be that fifty years from now we will feel him stronger amongst us than right now. We live too close to him now. That is the way I look at Wright, and I think of Wright as the greatest living architect."

Architect Alberto Sartori, who discovered Wright as a student, offered a view of how Wright's ideas took root in South America, particularly in Chile after 1940. In the 1950s an entire generation of young Chilean architecture students was inspired by Wright's ideas, and their impact has endured for decades. Sartori has also shown how a professional life devoted to Wright's organic principles can interweave with the rich and varied cultures of Latin America. Wright had an important influence on architects and painters like Juan O'Gorman, Max Cetto, Diego Rivera, and Luis Barragán. Architects elsewhere often copied Wright's forms; in Mexico, however, Wright's ideas had more impact than his formal language.

However, that language did have broad adaptability in his own hands, as his little-known impact in the Middle East attests. In 1957, Wright and other Western architects were each invited to design one building for the modern capital of Iraq. Although commissioned to design an opera house, after traveling to Baghdad, Wright apparently secured permission to proceed with the design of an entire cultural center which would include the opera house and a civic auditorium, as well as a new post office. He then added designs for an art gallery, a museum of archaeological antiquities, and a campus for Baghdad University.

In Japan Wright influenced architects as deeply as their forbearers had influenced him. This is especially apparent in the contemporary work of Kazuyo

Sejima, Kengo Kuma, and Takaharu Tezuka, the latter reflecting on Wright's role: "Residents of Wright-designed houses never have to endure a cold, rational atmosphere. When he creates comfortable spaces, they naturally become sustainable. We still have a lot to learn from him…studying Wright's buildings is a superb opportunity for us to learn the texture of reality."

During his lifetime, Frank Lloyd Wright received numerous citations and awards acknowledging the influence his work had upon architects and within architectural history. Among those conferring honors were the Imperial Household of Japan (1919); the Royal Institute of British Architects (1941); the American Institute of Architects (1948); the City of Florence, Italy (1951); the Republic of Italy (1952); and the City of Darmstadt (1954). Honorary memberships included those to the Academie Royale des Beaux-Arts, Belgium (1927); National Academy of Cuba (1927); Akademie der Kunst, Berlin (1929); Central Institute of Architects, Brazil (1931); National Academy of Brazil (1932); College of Architects, Havana (1932); Congress of Pan American Architects (1940); National Academy of Architects, Uruguay (1942); National Academy of Architects, Mexico (1943); National Academy of Finland (1946); National Institute of Arts and Letters, United States (1947); National Society of Architects, Portugal (1949); and the Academy Royal des Beaux-Arts, Sweden (1953).

The Legacy of Wright's Influence

The work of Frank Lloyd Wright has had a profound influence on numerous younger architects of international stature, including Rudolph Schindler, Richard Neutra, Antonin Raymond, Eliel Saarinen, Harwell Hamilton Harris, Paul Rudolph, Paolo Soleri, Herman Hertzberger, and Kisho Kurokawa. His work has also influenced many international contemporary architects, among them a long list of Pritzker Architecture Prize laureates. Frei Otto (Germany; 2015), who embarked on a study trip through the United States in 1950 to visit the work of Wright, Erich Mendelsohn, Eero Saarinen, Ludwig Mies van der Rohe, and Richard Neutra, among others.

Similarly, Richard Rogers (United Kingdom; 2007) and Norman Foster (United Kingdom; 1999) toured the United States as students at Yale University, with Rogers later describing Wright as "My first God." On his first trip to the United States, Jørn Utzon (Denmark; 2003) met Wright and stayed at **Taliesin** in 1949, and he was influenced by Wright's focus on landscape and dramatic horizontality. Utzon came to share with him a global building culture, according to historian Kenneth Frampton: "For Utzon, as it was for Wright…there would be no necessary contradiction between an unequivocally modern architecture and a building culture that hypothetically would be generally more accessible to a society at large."

Shigeru Ban (Japan, 2014) credited his childhood play with geometric wooden blocks, as Wright had, for his ability to see architectural forms as abstractions. The critic Paul Goldberger praised the pavilion designed for the Hannover World's Fair by Peter Zumthor (Switzerland; 2009) as echoing the lines and masses of early Frank Lloyd Wright. As designer of Melbourne's Sterling Global Tower, Jean Nouvel (France; 2008) was so inspired by a design at **Taliesin** that he reinterpreted its textile form to one of a curtain wall composed of different types of glass. Tadao Ando (Japan; 1995) recalled visiting Wright's Imperial Hotel in Japan when he was seventeen, impressed by his treatment of space.

Zaha Hadid (United Kingdom; 2002) was commissioned to design an addition to Wright's Price Tower in 2002 (unrealized), and was the subject of a career retrospective at the **Solomon R. Guggenheim Museum** in 2006 where her abstract architectural compositions interacted with Wright's spiral gallery. Hadid admitted the museum had a significant influence on her work. "Frank Lloyd Wright was a visionary…the museum becomes continuous, the starting point for a promenade…[finally escaping] from those enfilades of rectangular rooms, without perspective or depth, that characterized the aristocratic palace…Exhibitions can be hung in front of everyone; the museum comes to life, like a body in motion." Her death in 2016 brought forth associations to Wright: "Her Millennium Park pavilion [drew] comparisons to the spatial mastery of Frank Lloyd Wright (*Chicago Tribune*);" and "One of her boldest buildings, Port House, opened in a ceremony…[that] amounted to a curtain rising on the second act of [her] career, as operatic as any since Frank Lloyd Wright's (*New York Times*)."

The critic Ada Louise Huxtable described the spatial qualities of designs by Frank Gehry (United States; 1989) as "built upon the liberated 'box' that Frank Lloyd Wright broke open forever." When it was completed, Gehry's Guggenheim Museum in Bilbao, Spain, drew natural comparisons to Wright's for New York City. He recalled in a 2009 interview having "studied every section drawing, model, and building of Frank Lloyd Wright. Everything….I went to see **Robie House**. I went to see **Unity Temple**. I studied **Taliesin** and **Taliesin West**… I knew Frank Lloyd Wright."

Additionally, Wright's architecture, and often Wright himself, entered into the popular culture realms of radio, television, and film to further influence the general public. Audio recordings (LP format) of his talks included "Frank Lloyd Wright on Architecture: Frank Lloyd Wright Talks to and with the Taliesin Fellowship" (3 record set, Columbia Records, 1951-1952) and "Frank Lloyd Wright on Record" (Caedmon Records, 1956).

On American television, Wright participated in featured interviews with journalists Mike Wallace ("The Mike Wallace Interviews," 1957); and Hugh Downs

("Conversations with Elder Wise Men—A Visit with Frank Lloyd Wright," 1953), and became widely known as a special guest on national television shows in the 1940s and 1950s including "Popular Science" (1942), "Omnibus" (1953); and "What's My Line?" (1956).

Frank Lloyd Wright's buildings have served as settings in films, including *A Summer Place* (dir. Delmer Daves, 1959); *North by Northwest* (dir. Alfred Hitchcock, 1959); *House on Haunted Hill* (dir. William Castle, 1959); *Bye Bye Birdie* (dir. George Sidney, 1963); *Three Days of the Condor* (dir. Sidney Pollack, 1975); *Manhattan* (dir. Woody Allen, 1979); *Blade Runner* (dir. Ridley Scott, 1982); *Black Rain* (dir. Ridley Scott, 1989); *Grand Canyon* (dir. Lawrence Kasden, 1991); *Gattaca* (dir. Andrew Niccol, 1997); *Men in Black* (dir. Barry Sonnenfeld, 1997); *The Aviator* (dir. Martin Scorsese, 2004); and *The International* (dir. Tom Tykwer, 2009). Others have served as settings for popular television series, among them "Star Trek: Deep Space Nine" (1993-1999); "Buffy the Vampire Slayer" (1997-2003); and "Game of Thrones" (2011-present). His life and work were the subjects of a feature-length documentary, *Frank Lloyd Wright—A Film*, directed by Ken Burns and Lynn Novick in 1998, that included interviews with contemporary scholars William Cronon, Brendan Gill, Paul Goldberger, Vincent Scully, and Meryle Secrest, and architects Philip Johnson, Maya Lin, and Robert A.M. Stern.

In short, *The Modern Architecture of Frank Lloyd Wright* demonstrates an important interchange in the dialectic that developed and disseminated modern architecture on a global basis during the first half of the twentieth century. The legacy of this approach endures as a separate current of thought within modern architecture.

The Following Buildings Have Been Identified as Possible Future Extensions to the Series

WARD WILLITS HOUSE

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

The Willits House is a further illustration in the series of spatial continuity expressed through the open floor plan.

This is the first fully realized Prairie house, embodying all its characteristic elements. Though less refined in design and execution than the more mature work of Robie House, it was widely published and included in exhibitions. Its cross-axial plan was widely imitated and continues to be referenced today.

ALICE MILLARD HOUSE "LA MINIATURA"

Attribute 2: Design inspired by nature's forms and principles.

The Millard House is the primary example in the series of the expression of the intrinsic qualities of materials.

A superior example of a textile block house, demonstrating honest and expressive use of concrete block forms, while creating an intimate connection to its site.

S.C. JOHNSON ADMINISTRATION BUILDING AND RESEARCH TOWER

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

The S.C. Johnson complex is the primary illustration in the series of the use of dynamic forms that employ innovative structural methods.

The Administration Building created a new environment for office work, using dramatic organic forms, particularly its dendriform columns, and indirect light. An influential example of Wright's exploration of created environments through dynamically changing perceptions of space and light. It is a structurally adventurous inspiration drawn from nature's forms.

PAUL HANNA HOUSE

Attribute 2: Design inspired by nature's forms and principles.

The Hanna House is a further illustration in the series of unity of design, expressed in the integration of the parts with the whole.

A more elaborate plan than the Herbert and Katherine Jacobs House in applying Usonian principles for organization of space, it escapes from previous constraints of rectilinear geometry to more fully synthesize the connection between interior and exterior with a hexagonal plan. Though widely published, it was not directly imitated because of its geometric complexity.

HERBERT JACOBS HOUSE II

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation.

The second house for Herbert and Katherine Jacobs is a further illustration in the series of the use of dynamic forms that employ innovative structure and materials.

Widely regarded as a model home for ecological design at the time it was built in 1944, it was prescient in its use of sustainable building precepts such as the use of local materials, and passive heating/cooling abilities achieved through its innovative form, southerly orientation, and earth-bermed northern wall. It is still widely studied in architectural curricula around the world.

TAZAEMON YAMAMURA HOUSE

Attribute 3: Architecture responsive to an evolving American experience.

The Yamamura House is a further illustration in the series of transforming inspirations from other places and cultures.

This work, which is formally complex and deeply tied to its setting, is particularly notable for the way that it blends traditional Japanese elements with modern functional features drawn from Wright's earlier Prairie houses.

	ATTRIBUTE 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation			ATTRIBUTE 2: Design inspired by nature's forms and principles			ATTRIBUTE 3: Architecture responsive to an evolving American experience			
PROPOSED SERIAL COMPONENT	1A. Spatial continuity expressed through the open plan and blurred transitions between interior and exterior spaces	1B. Dynamic forms that employ innovative structural methods and an inventive use of new materials and technologies	1C. Richness of experience created through contract and carefully composed paths of movement	2A. Integral relationship with nature	2B. Unity of design expressed integration of the parts to the whole	2C. Intrinsic qualities of materials expressed	3A. Changing modes of living are addressed	3B. Primacy of the individual and individualized expression	3C. Transforming inspirations from other places and cultures	Component's influence on the development of architecture
Ward Willits House	●		●	●	●	●	●	●		First fully mature Prairie design
Alice Millard House		●	●	●		●		●	●	
S.C. Johnson Administration and Research Tower	●	●	●	●	●	●	●	●		Redefined the notion of workroom laboratory
Paul Hanna House	●	●	●	●	●	●	●	●		
Herbert Jacobs House II	●	●	●	●	●	●	●	●		
Tazaemon Yamamura House	●		●	●	●				●	

How Each Building Identified as a Possible Future Extension Expresses the Attributes

WARD WILLITS HOUSE

The first true Prairie house, Ward Willits House provides an architectural clarity not seen in Wright's earlier work. Its cross-axial plan pinwheels around a central fireplace and chimney mass with perpendicular wings extending out in four directions connecting the house with its setting. The plan, Wright wrote, "was arranged to offer the least resistance to a simple mode of living, in keeping with the high ideal of family life together," while the low, horizontal exterior with deep, overhanging eaves, "recognizes the influence of the prairie, [and] is firmly and broadly associated with the site." The dining room, in particular, presents a significant change in the shaping of architectural space. In it enclosing walls dissolve into continuous screen-like walls of leaded glass windows and glazed doors, opening out to verandas and the surrounding garden permitting nature to penetrate the interior. The roof is flattened further, and the eaves are deeper than in any earlier Wright house and interior ceiling heights and floor levels alternate to create a progressive experience of expansion and contraction. Decorative wood slatted screens, low built-in bookshelves and seating, combine with carefully delineated rooms and the Wright-designed furniture to create a new unity of expression. Though the Robie House refined these elements further, the Willits House was the first to contain all the characteristic elements of the Prairie house form.

TAZAEMON YAMAMURA HOUSE

The Tazaemon Yamamura House is one of several smaller projects undertaken by Wright along with his assistant Arata Endo, while he was working on the Imperial Hotel. The house is surrounded by mature trees and situated at the crest of a ridge above the Ashigawaya River with views to Osaka Bay. The building is angled to follow the slope in a series of four one-story set-backs ascending the hill beginning with the living room, which acts as a threshold spanning the car court. Above the living room is a gallery with views on one side and muti-functional Japanese-style rooms with tatami mats on the other. On the fourth level is the largest space, a dining room, along with an expansive south-facing terrace offering views of the bay. Further up the hill behind the dining room is a service wing. A view of the bay can be glimpsed from the car court; however, the entry faces the mountain. The visitor enters a small foyer and then, turning and ascending the stairs, reaches the living room, anchored by a fireplace on one side and views on three other sides. A sense of progressive discovery unfolds through a series of twists and turns as one climbs three more floors to the dining room at the top, where the processional culminates. Though not widely studied by Wright scholars, John Sergeant contends the Yamamura House "is a crucial link between the movement patterns of his earlier Prairie houses and the subtle interplay with the greater landscape of his later work." Constructed of Ōya stone over reinforced concrete, plaster and Philippine mahogany all naturally expressed, the building is a seamless blend of traditional Japanese elements with those for contemporary living drawn from Wright's earlier Prairie houses.

ALICE MILLARD HOUSE "LA MINIATURA"

La Miniatura is a superior example of the use of Wright's innovative textile block system of construction. The use of these blocks is an honest and expressive use of concrete, while creating an intimate connection to its setting. Constructed in a ravine on a site that many architects might view as unbuildable, the house consists of two squares joined at one corner by a corridor emerging from behind a fireplace. The square in the rear contains a one-story garage entered from the street behind the house and entrance loggia connecting it to a three-story square set into the ravine in front. On its lower level, the front cube holds a dining room with a terrace overlooking a pond and servant's room. Located above is a double-height living room and guest room and above it, the owner's double-height bedroom and balcony overlooking the living room. The house is without foundations, and an underlying grid operates both in plan and section, i.e., vertically and horizontally, extending to the perforated concrete blocks used on both the interior and exterior, and held together with steel ties. The surface of the blocks is encrusted with crushed shells, enlivening the walls while other blocks have glass inserts that create a rich play of light on the interior walls. La Miniatura is among the best representations of Wright's doctrine of unity, which lies at the root of all of his most significant works.

S.C. JOHNSON ADMINISTRATION BUILDING AND RESEARCH TOWER

The Administration Building is an early and highly successful creation of an open plan-type office space arrangement. Designed for maximum efficiency, the Great Workroom (as Wright named it) is a dramatic and dynamic space, with its forest of reinforced concrete "lily-pad" columns and soft natural light. It is also notable for the positive psychological impact it has on its occupants and remains in use today. The building is a complete work of art; with every chair, desk, and other pieces of furniture and interior design elements designed by the architect resulting in an extraordinary light-filled, open, rhythmically articulated, beautifully furnished space for the company's white-collar workers. The use of reinforced concrete for the highly unusual columns was a notable innovation, as were the

horizontal bands of Pyrex glass tubing (later replaced by molded Plexiglas) to articulate the space. The resulting effect led the architectural critic and historian Siegfried Giedion to describe the building as an unprecedented return to "luxury" for modern architecture. The building also shows an early incorporation of the automobile in the design of covered parking that acts as, and provides direct access to, the main entrance to the building. The later addition by Wright of the Research Tower, in the same materials as the original structure, with its cantilevered floors, gives a vertical accent to the horizontal composition and a powerful point of focus to the whole in its urban setting. The two buildings create an integrated arrangement of administrative and research space combined with recreational and social facilities for employees.

PAUL HANNA HOUSE

The Hanna House, designed for two practical-minded educators, applied all of the Usonian elements established in the first Jacobs House: economical construction, clear expression of the inherent nature of materials, spatial flow and especially unity of design, in an innovative hexagonal plan. Modeled on the geometry of a honeycomb, the house incorporates six-sided figures with 120-degree angles in its plan, in its tiled terraces, and built-in furnishings. Wright contended the system of hexagonal modules provided a new openness and freedom of movement while gracefully integrating the house with its sloping topography. One story high with a central clerestory, the house is constructed both on exterior and interior of native California redwood reverse board and batten, San Jose brick, concrete, and glass. The easily expanded hexagonal plan allowed the building to wrap around the contours of the hillside to form a curved hollow of a garden. The ridged roof planes and hexagonal grid incised in the concrete floor and terraces unify and interrelate the parts of a plan that meanders around the site's trees, corners, and levels in a natural, uncontrived way. The living areas fan out around the curve of the fireplace as spaces beyond are partially glimpsed, over seating areas and bookcases, through trellised eaves, and beyond the corners of the wood walls. However, once entered, previously revealed spaces become concealed in a rich, sequential experience of space. The Hannas delighted in the house, its comfortable fit with their casual lifestyle, and the way it could be easily expanded to adapt to the changing requirements of their life. They lived in the house for 38 years and described their experience living there as, "Our love affair with our house."

HERBERT JACOBS HOUSE II

The Jacobs House II was designed in 1943 for the owners of Jacobs I whose expanding family now required five bedrooms. Located in rural Middleton, Wisconsin, the house, also known as the Solar Hemicycle House, employed innovative bermed construction with a curved form. From the north, the structure appears to be a hillock with an outcropping of native stone and an opening tunneled through it. The tunnel entry opens onto a sunny garden around which the curved and fully glazed south façade wraps, integrating house and setting. The ground floor is essentially a single 126.35-square meter room with a fireplace, chimney, kitchen, two bathrooms, and a stair concentrated within a two and one half story cylindrical form of local stone located near the tunnel entry. The second-floor bedrooms look out upon the garden below. Widely regarded as a model home for ecological design at the time, it was prescient in its use of sustainable building precepts such as: an earthen berm on three-sides to shelter the house and protect it from cold northerly winds in winter; a curved design (120-degrees of a circle) and southern orientation to allow for solar penetration through window wall; radiant-heat floors; masonry walls and concrete floors for thermal massing and summer cooling; and air pressure differentials and convection loops created naturally by the layout of the ground floor and overhanging mezzanine.

3.1.c Statement of Integrity

The Integrity of the Series

The integrity of this series, *The 20th-Century Architecture of Frank Lloyd Wright*, is based upon the discriminating selection of a small number of properties that best demonstrate key attributes of a distinctive expression of modern architecture for the twentieth century. The previous section, 3.1.b, contains a summary of how each building in the series contributes uniquely to illustrating different aspects of the proposed Outstanding Universal Value. The eight buildings included for nomination at this time include primary illustrations of the three attributes that support World Heritage criterion (ii), and are shown to have exercised influence on global architecture.

The six buildings proposed as future extensions would provide additional illustrations of two types of residential architecture—the Prairie house and the Usonian house—already represented in the series by the recognized epitomes of those forms, the Robie House and the first Jacobs House, respectively. The extensions would also include a "textile block" house—the Millard House—as an additional illustration of the architectural expression of the intrinsic qualities of materials, and the S.C. Johnson Administration Building and Research Tower and the Herbert Jacobs House II as additional illustrations of the use of dynamic forms with innovative structural methods. The Tazaemon Yamamura House in Japan would provide a further illustration of the transformation of inspirations from other places and cultures. See discussion of consideration affecting nomination of future extensions on page 263.

Integrity of the Components of the Series

The integrity of the *The 20th-Century Architecture of Frank Lloyd Wright* is fulfilled by the inclusion of all designed elements that contribute to the outstanding values of the property. The structures all are in good condition, and the few changes made to the buildings since their construction primarily pertain to correcting deterioration of materials that has occurred over time, especially where untested methods were used in construction. The text that follows details the situation of each component of the series. None of the properties are subject to inappropriate development in the vicinity.

For those components where the architectural design considered views of the surrounding natural landscape (Taliesin, Fallingwater and Taliesin West), we have ensured that critical views are protected within the buffer zones. The size of the areas involved make it impractical to enlarge the property boundaries to include all areas visible from the properties; however the buffer zone protections are sufficient to protect the character of those settings and important views (see Section 5.c for details).

UNITY TEMPLE

All elements necessary to express the significance of Unity Temple are included within the proposed boundary. These elements include the form, relationship, and appearance of the three functional units of its reinforced concrete structure: the dominating cubical auditorium/worship space (Unity Temple) at the northern end; a lower, rectangular social hall (Unity House) at the southern end; and a still lower entrance hall which serves as a connecting link between the two major volumes. The oldest of the proposed properties within this nomination, now over one hundred years old, it has required several repair campaigns to address deterioration of the original materials, particularly from water infiltration of the concrete slabs. With the recent completion of a comprehensive restoration program, the physical integrity of Unity Temple is strong. Its setting is similar to that for which it was designed.

ROBIE HOUSE

All elements necessary to express the significance of the Frederick C. Robie House are included within the proposed boundary, specifically the exterior form and appearance of the house, the configuration of its interior spaces, and its attached garage and courtyard. It was designed and built in a setting similar to the one in which it exists today. Although the scale and massing of a few nearby properties have changed over time, such changes are limited and controlled in the Planned Development District where it is located. It has had several changes made to the interiors over its history, due to changes in use, but recent careful restoration has returned original design elements to the interior. The Robie House did not suffer any significant changes to the character of its exterior, especially to the dramatic projecting rooflines that characterize the house as Wright's most important house of his Prairie period.

TALIESIN

All elements necessary to express the significance of Taliesin are included within the proposed boundary. These elements include the main house complex and its

adjacent gardens, the studio, and the immediate landscape within the circular drive surrounding the main house. As the complex served as a laboratory for Frank Lloyd Wright's ongoing experiments in architecture, it evolved over time, including substantial rebuilding following two significant fires. These changes are important to the character and significance of the property. Condition problems that were noted in 2010, when Taliesin was included on the World Monuments Fund "Watch List," have been addressed through careful conservation work in recent years. (A subsequent WMF listing in 2014 focused attention on conservation issues involving the Hillside Theater, which is located in the buffer zone; remediation work is now underway.) Views of the wider vernacular rural landscape from the house are contained within the buffer zone and have legal protection (see Section 5.c.); there are no development threats to them.

Other ancillary structures on the estate, well-removed from the main house complex, are included in the buffer zone—though designed by Wright, they fulfilled primarily functional roles in the estate and do not exhibit to any notable degree the "organic" qualities (relation to the landscape, rooms extended diagonally out to terraces, meandering forms incorporating outdoor spaces, adaptation of Japanese forms) that comprise the outstanding values of the main Taliesin house.

HOLLYHOCK HOUSE

All elements necessary to express the significance of the Hollyhock House are included within the enlarged proposed boundary, which includes the house, garage and chauffeur's quarters along with the surrounding property on Olive Hill that comprises most of Barnsdall Park and which provides the house with its distinctive immediate setting. This area also includes protected areas and structures on the lower slopes of Olive Hill. These latter structures include the Spring House and Residence "A"—both designed by Wright; the Schindler Terrace (1924), the Junior Arts Center (1967), and the Municipal Art Gallery (1971). The Arts Center and Art Gallery are on the lower slopes of the hill on the eastern edge of the property and are not clearly visible from Hollyhock House.

The buffer zone consists of the surrounding urban area below Olive Hill and outside Barnsdall Park that is bounded by Hollywood Boulevard, West Sunset Boulevard, North Vermont Avenue, and North Edgemont Street. This area is protected by local zoning law and City policy that restricts the height of new construction to 15.24m, a limit identified by the City that will prevent construction that could interfere with views from Hollyhock House.

FALLINGWATER

All elements necessary to express the significance of Fallingwater are included within the proposed boundary. These include the main house, the guest wing, carport and staff quarters, the section of the entry drive now used by visitors and the bridge, as well as the immediately surrounding natural landscape elements: the falls of Bear Run and the gorge surrounding the built structures. With the exception of a small extension to the floor plan to accommodate a servants' sitting room, and repairs necessitated due to damage by fallen trees and floods, few changes have been made to Fallingwater since it was completed. The areas that have changed the most are, to the untrained eye, virtually invisible and were made using like materials to the originals. Preservation of the house has been meticulous, and includes repair of the deflection of the cantilevers of the main balconies. This change, like replacement of all of the house's window glass for ultraviolet protection, has no impact on the integrity of the design of the house or the experience of visiting Fallingwater. The large buffer zone preserves longer views from the house and the remote natural character of the setting.

HERBERT AND KATHERINE JACOBS HOUSE

The boundary for the Herbert and Katherine Jacobs House is its two lots, which comprise the historic property of the house and its garden. The hand-laid brick, reverse board-and-batten wall system, custom-made doors and windows, and modularity of its organization based upon a floor grid were its most marked characteristics. The Jacobs House has experienced some significant changes to its historic fabric since the time of its construction, including replacement of major portions of the concrete slab foundation (due to the corrosion of the house's radiant floor heating system) and large sections of the roofing system and carport due to decay. Because of the extensive documentation of the building, all of the conservation efforts were able to very closely match the form, color, materials, and textures of the original materials. None of the work has diminished the design and critical components of the property. The setting, including the immediate surrounding area that forms the buffer zone, is preserved as a low-scale residential neighborhood, which was the original setting for the house when it was built.

TALIESIN WEST

All elements necessary to express the significance of Taliesin West are included within the proposed boundary, which has been enlarged to include the entire complex designed by Wright with later additions made by his wife and the Taliesin Fellowship. These include the office, drafting studio, kitchen, dining room, garden room and the Wrights' former living quarters, apprentice court, and the so-called Kiva and Cabaret theaters, as well as the later Music Pavilion and addition to the living quarters for apprentice apartments. Taliesin West began as a simple, rustic camp in the Arizona desert and evolved into a winter campus for Frank Lloyd

Wright and his apprentices. Like Taliesin, it was a laboratory for Wright's evolving thoughts on architecture. Many of the structures were intended to be temporary, but were later adapted to become permanent additions to the site during the years of Wright's tenure. The experimental nature of the buildings and their construction materials assumed that structures, forms, and functions would progress over time, and these changes are an essential part of the integrity of the property. While historic features are continually monitored by members of the Frank Lloyd Wright Foundation, Taliesin West was fluid and experimental from the outset, never intended to be "complete." Though there has been suburban development in the urban areas surrounding the buffer zone, the large size of the buffer protects the desert character of the area surrounding the complex.

SOLOMON R. GUGGENHEIM MUSEUM

All elements necessary to express the significance of the Solomon R. Guggenheim Museum are included within the proposed boundary. These elements are the original museum structure and its narrow ten-story annex. The Guggenheim has experienced changes in the use of some of the interior spaces, and in the finish and color of the exterior since the time of its completion. The ten-story addition that serves as a backdrop to the original rotunda and monitor, completed prior to its being named a New York City Landmark in 1990, was originally viewed with skepticism, but critical views have since softened. Architectural critic Paul Goldberger, one of the addition's early opponents, praised it in his later review writing, "The building is now a better museum and a better work of architecture. If the Guggenheim's roles as a museum and as a piece of architecture have always been at odds, this renovation at least partly resolves them. In the end [the architects] have come to praise Wright, not to bury him, and the honor they bring to the building ennobles us all." [Paul Goldberger, "The Liberation of the Guggenheim" *New York Times* (21 June 1992).] None of these changes, including the building addition, diminish the original design and effect of the Guggenheim. A recent conservation of the exterior of the structure addressed structural stabilization of the rotunda, the mechanisms of which are virtually invisible to the viewer. The Solomon R. Guggenheim Museum, an iconic masterpiece, celebrates the integration of program, form, and function to make it an outstanding example of organic architecture.

3.1.d Statement of Authenticity

THE EIGHT COMPONENTS in the series were selected from among the hundreds of extant Wright works specifically for their ability to best convey the influential attributes of World Heritage criterion (ii). The selection process considered and did not include some well-known buildings by Wright that had undergone major changes affecting their authenticity, such as reconstruction of significant components. All those selected for the series have remained largely unchanged since their construction. The component properties of the series have all experienced varying levels of repair, reconstruction, and preservation, but conservation of the sites has been in accordance with the highest standards of professional practice, with attention to historic methods, skills, and materials, and following *The Secretary of the Interior's Standards for the Treatment of Historic Properties* [Kay D. Weeks and Anne E. Grimmer, eds., published by the United States Department of the Interior (Washington, DC), 1995]. More recent methods and materials have supplemented historic ones only where absolutely necessary to ensure long-term preservation of original fabric and the significant features of each site.

The history of the work of Frank Lloyd Wright is the subject of extensive and diverse research and publication; therefore, the sites that comprise *The 20th-Century Architecture of Frank Lloyd Wright* are also exceptionally well documented. Original written and pictorial records of each component property's conceptual design, layout, and construction plans support and illuminate the resulting structures and landscapes. Similarly, restoration and maintenance archives of these sites are also considerable, and provide extensive information for each site's history (see individual components below).

Authenticity of Location and Setting

The locations of all of the component properties within the proposed series have not changed and are unquestionably authentic.

- **Unity Temple** remains in an urban setting very similar to the one surrounding it when it was constructed, with commercial structures alongside it to the east and west on Lake Avenue and houses to the north and south.
- Similarly, the setting for the **Frederick C. Robie House** always has been a mix of residential and institutional structures related to the University of Chicago; this continues to be the case.

- The pastoral setting of **Taliesin** remains virtually unchanged, even beyond the buffer zone.
- Situated upon the crown of Olive Hill, a commanding site in Los Angeles, **Hollyhock House** continues to overlook the surrounding city from its hill-top location in Barnsdall Park, which provides a secure and unchanging immediate setting for the house, improved in recent years by replanting of olive trees. While development continues in Los Angeles neighborhoods below, it is controlled by local law, and the height of the hill maintains the prominence and views from the house.
- The setting for **Fallingwater** is unchanged. Ancillary structures for visitors have been carefully placed to be out of view of the house. Its original 624.4ha wooded site has increased to over 2023ha of protected land.
- The **Herbert and Katherine Jacobs House I** is in a very stable suburban neighborhood, virtually unchanged in character and scale from the time of the house's construction.
- Though urban sprawl has engulfed the plain below **Taliesin West**, its original setting, including the desert vistas, the landforms, and the backdrop of the McDowell mountain range, all convey an authentic sense of place.
- Strict local historic preservation laws have preserved the original setting of the **Solomon R. Guggenheim Museum** in New York City; this includes both the other buildings along Fifth Avenue and to the east, as well as Central Park, across the street on the west.

Authenticity of Form and Design

For much of their lifespan, the buildings have been appreciated and cared for as masterworks; thus preserving the critical features of their form and design. More recent conservation work has replaced deteriorated or lost original details.

- The few changes made to **Unity Temple** include the addition of more restrooms in the lower level, and to the interior balconies of Unity House to create additional classroom space. These changes have had no effect on the key aspects of the form and design of the building.
- Though changes were made to the interior of the **Frederick C. Robie House** by its subsequent owners, a recent (and ongoing) conservation project has returned the structure to its condition shortly following its construction. Comprehensive documentation was available to ensure that the conservation work was exact.
- The focus of the ongoing conservation work at **Taliesin** is to maintain the property's historic core to its appearance during the final decade of Wright's life (1950-1959). Structures in the buffer zone have also been preserved with respect to their original design.
- At **Hollyhock House**, conservation of exterior features and interiors modified by subsequent architects (the architect's son, Lloyd Wright, and R.M. Schindler among them) ensures the authenticity of its form and design is retained. In 1974, changes to the form and design included roof replacements to the living room porch and pergola, the rebuilding of crumbling terrace walls, and the replacement of the entry hall spindle screen—all of which brought the house back to its 1921 appearance. The repair of damage from a 1994 earthquake was also completed with a vigilant eye to preserving character-defining features, as well as to seismically stabilize the structures. In more recent years, several windows were reconstructed to match lost originals.
- **Fallingwater** has seen very few changes made to its original form and design. A sitting area was added behind the kitchen by the client in 1946, primarily for servant use, and trellis beams above the east terrace were replaced due to tree damage in 1953, 1974, and 1982.
- Since 1983, the exacting conservation work carried out by the current owner of the **Herbert and Katherine Jacobs House** was conducted to maintain the original form and design of this prototypical suburban house. The cantilevered carport and its foundation piers were reconstructed; a later built-up asphalt roof was removed and replaced with a rubber membrane system—greatly reducing the stress upon the structure—but also necessitating the strengthening of the roof joists; and sagging corner conditions were corrected through the use of diagonal braces. Board and batten fences have been constructed at both ends of the house, according to Wright's original plans.
- **Taliesin West's** form and design retain the vision of its architect, and subsequent alterations made to accommodate system upgrades and programmatic changes have been, for the most part, sympathetic, and honor Wright's original intent. In the Apprentice Court a change was made to create a series of small apprentice apartments. In other cases, additions have obscured some minor aspects of the original buildings without damaging the original fabric. These post-1960 additions include: construction of the Music Pavilion and library, both of which abut the original Cabaret Theatre; and construction of apprentice living quarters adjacent to the Wright's private rooms and the Sunset Terrace. Each of these changes is being evaluated as part of the development of the 2014 Preservation Master Plan by Harboe Architects.
- The iconic inverted spiral form of the **Solomon R. Guggenheim Museum** is unchanged since its construction. Located on the site of the architect's own

proposed location for expansion, a four-story annex added to the northeast corner of the building (1966-1968) was then replaced by a ten-story tower (1988-1992). These and other minor subsequent interior adaptations made for programming purposes do not affect the overall design of this dynamic structure.

Authenticity of Materials and Substance

The series as a whole retains a high degree of original material, to a different degree for each component. Structural and materials degradation—often due to the experimental nature of Wright's designs—have in some cases required the replacement of original material in order to retain the original form and design and to ensure that the buildings remain safely in use. Where conservation required replacement of materials, the work has in all cases been documented, though it exists in a variety of forms and locations; see details below.

- **Unity Temple**, as described in Section 2.b., has seen changes to its exterior surface texture as well as significant repairs to the concrete slabs. Continuing problems with water infiltration have resulted in repeated interventions, culminating in a comprehensive conservation project in 2015-2017 that addressed these problems with modern systems for electricity, water and heat. Retaining as much original fabric as possible (including all the original concrete), it resulted in new roofs and renewal of interior finishes, returning the original wood strips after cleaning. Further details of this project are contained in Section 4.a. Despite these significant and necessary interventions, the original concrete of the exterior walls and interior decorative elements, such as woodwork, art glass clerestory and skylight windows, light fixtures, and original furnishings remain in place.
- The repairs and conservation undertaken at **Robie House** in recent years, and described in Sections 2.b. and 4.a., have retained, to the extent possible, the original materials. The tile roof had been previously replaced. While the mortar on the exterior walls was renewed, the brick and limestone remain largely original material. Almost all the original art glass is still in place; the glass in the front door and one of the servants' bedroom windows had been damaged or removed and have now been replicated with high quality workmanship. A reproduction iron gate for the courtyard was also installed. Overall, most of the material of the house is original.
- **Taliesin's** rough stone walls, unfinished timbers, granite floors, and interior finishes are an authentic reflection of Wright's direct personal work on the house and the frequent changes he made, including the incorporation of fire-burned stones following fires in 1914 and 1925. They show the character of the house as something of a workshop rather than a finished work for a client, and these materials have been faithfully conserved. Although the outlying buildings in the buffer zone do not share the evidence of organic experimentation by the architect or connection to the landscape through their design that is the basis of the house's contribution to the Outstanding Universal Value of the series, they are considered important to the history and function of the Taliesin Fellowship and the School of Architecture at Taliesin. As such, the ongoing conservation of these buildings is incorporated into the capital planning for the estate.
- The original materials of **Hollyhock House**—hollow clay tile blocks surfaced with stucco—as well its exterior and interior ornament have been well sustained through conservation. In addition to replacement of the roof, minor elements have been replicated based on excellent documentation and following professional standards. The seismic stabilization undertaken following the 1994 Northridge earthquake is an important measure that will help to ensure against damage to the structure well into the future.
- The effects of age and damage on **Fallingwater** due to water infiltration and falling trees has necessitated replacement of limited original fabric, especially in the case of the concrete east trellis (1953, 1974, 1982), stone repointing, and the roofing system overall. The majority of the original window glass was replaced in the 1980s to include protection from ultraviolet light. The majority of the rest of the original material of the house remains intact. The repairs to the cantilevered slabs will ensure against further damage to the original fabric. The house's original built-in and moveable wood furnishings and fixtures are intact and conserved annually.
- The first years of the **Herbert and Katherine Jacobs House** saw damage to the cast iron hot water pipes embedded within the cement slab under most of the house. The slab was recast, with the addition of a moisture barrier and insulation panels, and new tubing fabricated from polybutylene. In addition to major repairs to the roof, wood framed window doors in the living room were replaced with faithful reproductions. The cantilevered carport and its foundation piers were reconstructed. Despite these changes, which maintain the original design, the house's interior and exterior wood board-and-batten wall system and brickwork has been preserved and are in excellent condition, and the majority of the fabric is original.
- **Taliesin West's** canvas roofs, replaced in 1966 with Fiberglas panels, have been replaced again with a composite canvas and acrylic panel system, which retained the durability of the rigid material yet was more sympathetic to the original. The wood beam supports of the drafting room and its

adjacent pergola were replaced with steel supports due to deterioration of original materials. Conservation of original desert masonry, a material used on nearly all of the structures on the property, is ongoing, and the material continues to dominate the appearance of the complex.

- The **Solomon R. Guggenheim Museum** began a conservation effort in 2005 to investigate the origin of surface cracks. Eleven coats of paint were removed and the museum's original surface texture and color were reproduced, using like materials with structural stabilization measures introduced to strengthen its form, and monitoring devices installed to document any changes. The museum's terrazzo flooring, built-in furnishings, and features such as planters and fountains remain intact and are in excellent condition.

Authenticity of Use and Function

Many of the structures in the series continue to operate in their original capacity. Those not in their original use are operated as museums or carefully curated for public use consistent with their designs.

- **Unity Temple** still contains the multi-use functions for which it was designed. Its worship space is used for that purpose in addition to performance and assemblies, while Unity House is used for informal gatherings, related classroom activities, and office functions for the Unity Temple Unitarian Universalist Congregation.
- The **Frederick C. Robie House** was occupied by its original owners for only three years and then saw a short succession of private owners before it was purchased by the Chicago Theological Seminary for use as classrooms and dormitory. In 1963, the University of Chicago purchased the house and, following an in-depth conservation project, it presently functions as an historic house museum.
- **Taliesin** was constructed as a house for its architect-owner. In 1932, with several built or modified surrounding structures, it became the centerpiece of an apprentice-based architectural school and has continued in this function for over seventy years. Students and faculty of the School of Architecture at Taliesin are in residence at Taliesin from April to October; they reside at Taliesin West for the remainder of the year. The estate also houses the offices of Taliesin Preservation, Inc. and the Frank Lloyd Wright Foundation. It is open to the public for tours.
- **Hollyhock House** was originally a private residence. It served various compatible uses until it was restored and became an historic house museum in 1975.
- **Fallingwater** was designed as a weekend house in rural southwestern Pennsylvania and remained as such until 1963 when, still retaining its historic furnishings and artwork, it became an historic house museum.
- The **Herbert and Katherine Jacobs House** has remained a private residence since its construction.
- **Taliesin West**, a winter residence and campus for the architect's school of architecture, has remained in that function since its construction, although parts of the house are presently open for guided public tours.
- The **Solomon R. Guggenheim Museum** continues in its original function as a recognizable and important museum of contemporary art.

Authenticity of Spirit and Feeling

Spirit and feeling are important aspects of the Outstanding Universal Value of the series. All the properties in the series were selected for their ability to convey the particularly rich experiences provided by the architectural designs.

- The spiritual feeling that one experiences when visiting **Unity Temple** is immediate and visceral. Its monumental abstract geometric forms create a self-contained religious space lit from above, and the symbolic treatment of the church's features and motifs truthfully convey the Unitarian Universalist ideals of its congregation.
- The powerful spirit and feeling of the **Frederick C. Robie House** is achieved through its ingenious use of a structural cantilever for its major spaces, providing a sense of levitation. The openness of its interior, without the customary division of rooms, still resonates and continues to defy traditional notions of the house as a series of enclosures.
- Visitors to **Taliesin** feel a deeply ingrained connection between structure and its pastoral setting, which continues to permeate the experience of the house.
- **Hollyhock House's** design pays homage to the natural elements of water, earth, air, and fire. Interpreted through symbolic ornament, its interior provides a peaceful retreat from the city surroundings, reinforced by its location set high above the hubbub of the city.
- The intimate connection with nature is a hallmark of **Fallingwater**, where the sound of rushing water in the forested glen is never obscured by the structure. The physical connection to the site is embodied in the house's shady recesses and open terraces that clearly relate to the sandstone ledges on which the house sits.

- The homelike but expansive sense of the **Herbert and Katherine Jacobs House** is heightened by the warmth of its wood wall treatment. Expanses of full-height glass doors to the landscaped garden blur the boundary between interior and exterior, while a solid exterior wall on the street sides provides privacy.
- Although modernistic, **Taliesin West's** use of angular concrete forms and rustic desert masonry provide an elemental experience, reinforced as one moves through its buildings and plazas. Literally and figuratively connected to the rocky desert landscape, the assemblage of buildings created a sense of community that continues today.
- The **Solomon R. Guggenheim Museum's** dramatically unconventional pier supports, sculptural spiraling ramp, canted walls, and curvilinear structure allow the visitor to interact with the volumetric mass of the structure and created a communal experience for its visitors.

3.1.e Protection and Management Requirements

THE SERIES, *The 20th-Century Architecture of Frank Lloyd Wright,* meets the requirements for property protection in Article 5 of the World Heritage Convention. The Property has a mix of owners including private individuals, private not-for-profit organizations, and local government.

In the United States of America, unlike many nations, the strongest protections for property are at the individual and local level. Restrictive conservation easements, deed restrictions and local governmental ordinances that regulate land use and physical changes to historic properties are the most powerful measures that can be taken to guide future land use and define any future property development.

All of the individual properties in this series are protected either at the municipal level through local ordinances that regulate physical changes to the property, or through individual deed restrictions or conservation easements or covenants that legally restrict land use, building function, treatment of building fabric and contain other similar restrictions to ensure ongoing preservation of the sites for their heritage values. These types of legal agreements are held by third parties and are fully enforceable under state law. The specific legal protections for each property take various forms that are explained in detail in Section 5. The buffer zones are protected through similar instruments as well as by land-use zoning that restricts the use and form of new construction.

Federal laws also protect properties on the National Register of Historic Places and National Historic Landmarks, a designation given to all sites nominated in this series. The federal laws require federal agencies to evaluate the effect of their activities on historic properties and to minimize harm to those properties. Alternatives must be evaluated and any necessary mitigation efforts taken to ensure protection of historic resources. Thus, no development involving federal funds, licenses, or permits that could negatively impact the sites in this series will be allowed to move forward without multiple government agency reviews and the opportunity for broad public input. All states in the United States also have a federally designated State Historic Preservation Office that provides state government review for government undertakings that might impact historic resources. The aggregate of all these protective structures provides significant protection that extends beyond the buffer zones proposed, and is not limited in its physical extent.

Each component site has an effective management system that has been responsible for the current state of good conservation of each of the sites in this series. All the buildings, with the exception of the sole small private residence, are professionally managed, and all have access to the highest quality of conservation advice. Management adheres to a common set of standards; i.e., the *United States Secretary of the Interior's Standards for the Treatment of Historic Properties*. Preservation specialists are available to all sites to provide professional expertise, and the components make use of a wide variety of management and conservation plans and baseline documents.

The unifying management structure for the serial property was established in 2012 through a Memorandum of Agreement between the property owners of each individual site and the Frank Lloyd Wright Building Conservancy. The Agreement established the Frank Lloyd Wright World Heritage Council. This Council, which had its first annual meeting in 2012, provides a communication and coordination framework and also serves as a resource for all of the individual sites represented on the Council. The Council helps ensure all sites meet the shared management objectives for preservation and assists member sites by providing a network for property managers and owners to discuss best practices. The Council's annual site condition reports, which began in 2013, provide information to assist the Council in identifying preservation issues and ensuring that they are addressed according to the proper standards. *The 20th-Century Archi-*

tecture of Frank Lloyd Wright does have some long-term management challenges, including maintaining protection of the setting of those sites for which it is an important component of the Outstanding Universal Value. A larger management challenge is the extent of conservation required for some of the sites and the costs associated with that need. Both Taliesin and Taliesin West were experimental in nature and built by unskilled labor using materials at hand. Unity Temple faces challenges from its unorthodox design and the effects of time. Despite these challenges, all of the sites have robust fund-raising capabilities and a dedicated group of supporters that have consistently come to their aid. Moreover, The Frank Lloyd Wright World Heritage Council and the Frank Lloyd Wright Building Conservancy are committed to continuing to monitor and support the individual sites.

Structural fire is also a management concern for all of the sites in this series. All management actions to ensure protection from structural and wildland fire are being evaluated and appropriate action taken for prevention and suppression of fire. Lastly, the carrying capacity of each of the component sites in this series is carefully monitored to ensure preservation. Many sites in this series can take far more visitation than is presently enjoyed. Others however, such as Fallingwater, are near their upper limits. Fallingwater is taking steps to allow additional visitors to experience most aspects of the historic resources without actually entering the buildings. Presently this is in the form of film and computer assisted virtual tours. As experiential technology improves the possibilities for this type of management response to carrying capacity issues will continue to be explored by the individual sites and the Frank Lloyd Wright World Heritage Council.

3.2 Comparative Analysis

THIS COMPARATIVE ANALYSIS shows that, while other twentieth-century movements in architecture and the bodies of work of other architects of the period included some aspects of the Outstanding Universal Value of the nominated series of works by Wright, none did so in a way that synthesized all three of the critical attributes for criterion (ii) identified in this nomination, and none did so with the same effect and influence that reflect these consistent organic principles. The breadth of the examples included in this series demonstrate the full range of these principles, as they evolved over Wright's long period of work.

Methodology

I. Identification of Comparable Properties Relating to the Attributes of Outstanding Universal Value

A comparison has been made of the proposed series with architectural movements during the same period, as well as bodies of works by architects represented on the World Heritage List, Tentative Lists, and other architects relevant to the comparison. The scope for the comparison includes North America, South America, Japan, Australia, and Europe of the same historic period of time, generally the first half of the twentieth century.

II. The Comparison of Properties and Outstanding Universal Value

For all the comparative cases, we have considered factors related to the three identified attributes of criterion (ii) for this series, i.e. how their work approached form and space, their relationship to nature and setting, and experiential qualities compared to those in the series. Comparisons are made to all three attributes, but in some cases are most applicable to one or two of them. (For example, the comparisons of architectural movements and works from the early years of the twentieth century present fewer aspects relevant to Attribute 3 as it relates to changing modes of living.)

Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation:

- **1A.** Spatial continuity expressed through the open plan and blurred transitions between interior and exterior spaces.
- **1B.** Dynamic forms that employ innovative structural methods and an inventive use of new materials and technologies.
- **1C.** Richness of experience created through contrast and carefully composed paths of movement.

Attribute 2: Design inspired by nature's forms and principles:

- **2A.** Integral relationship with nature.
- **2B.** Unity of design expressed through integration of the parts to the whole.
- **2C.** Intrinsic qualities of materials expressed.

Attribute 3: Architecture responsive to an evolving American experience:

3A. Changing modes of living are addressed.

3B. Primacy of the individual and individualized expression.

3C. Transforming inspirations from other places and cultures.

III. Identification of Comparative Frank Lloyd Wright Properties Showing the Selection Process for the Proposed Series and Those Identified as Possible Future Extensions to the Series

A comparison of Frank Lloyd Wright properties has placed the eight proposed components of the series (and six additional components that may be nominated later as extensions) within Wright's oeuvre, explaining how the components were selected from among all the other extant works by Wright. This explanation includes specific examination of the three defined attributes for all the buildings that are considered to be nationally significant in the United States as well as the small number of extant works in other countries.

I. Identification of Comparable Properties Relating to the Attributes of Outstanding Universal Value

We have identified the following architectural movements of the twentieth century to be relevant to the comparative analysis:

- Art Nouveau, Secessionstijl, Jugendstijl, and Modernisme
- The Arts and Crafts Movement (in Great Britain and the United States)
- Expressionism (and its antecedents)
- Dutch Modernism and De Stijl
- Art Deco
- The Modern Movement, including American Modernism

In 2018, the World Heritage List included 37 properties as part of twentieth-century World Heritage, but almost a third of these are listed for reasons other than their architectural qualities.

Thus, only 26 properties are listed for their outstanding contributions to the development of twentieth-century architecture and urbanism. A select number of these properties have been identified as relevant to the comparative analysis, and these are listed below. They are discussed within the consideration of larger movements or bodies of work, as noted below.

- Works of Antoni Gaudí (i, ii, iv); 1985, 2005
- Bauhaus and its Sites in Weimar, Dessau and Bernau, Germany (ii, iv, vi); 1996; 2017 – *discussed under the Modern movement*
- Major Town Houses of the Architect Victor Horta (Brussels), Belgium (i, ii, iv); 2000 – *discussed as part of the Art Nouveau movement*
- Tugendhat Villa, Brno, Czech Republic (ii, iv); 2001 – *discussed under the body of work of Ludwig Mies van der Rohe*
- Secession Gallery, Vienna, Austria (i, ii); 2001 – *discussed under the Art Nouveau movement*
- Luis Barragán House and Studio, Mexico (i, ii) 2004 – *discussed under the Modern Movement*
- Berlin Modernism Housing Estates, Germany (ii, iv); 2008 – *discussed under the Modern Movement and the body of work of Walter Gropius*
- Stoclet House, Belgium (i, ii); 2009 – *discussed under the Art Nouveau movement*
- Fagus Factory in Alfeld, Germany (ii, iv); 2011 – *discussed under the Modern Movement and the body of work of Walter Gropius*
- Van Nellefabriek, Netherlands (ii, iv); 2014 – *discussed under the Modern Movement*
- *The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement*; Argentina, Belgium, France, Germany, India, Japan, Switzerland (i, ii, iv); 2016

As of January 2018, 17 proposals involving twentieth-century architecture are included on Tentative Lists. The following items among them are relevant to the comparative analysis. Some of them are discussed within the consideration of larger movements or bodies of work, as noted below; others have informed the comparison but may not be individually discussed.

- Belgium: The Architectural Work of Henry van de Velde (i, ii); – *discussed under the Art Nouveau movement*
- Cuba: National Schools of Art, Cubanacán (i, ii, iii, iv, v); – *relevant to the Arts and Crafts movement*
- Finland: Paimio Hospital (i, ii, iv); – *discussed under the body of work of Alvar Aalto*
- Lithuania: Kaunas 1919-1939: The Capital Inspired by the Modern Movement (ii, iv); – *relevant to the Modern Movement*
- Portugal: Ensemble of Álvaro Siza's Architecture Works in Portugal (i, ii, iv); – *discussed under the Modern Movement*

- Netherlands: Sanatorium Zonnestraal (i, ii, iv); – *relevant to the Modern Movement*
- New Zealand: Napier Art Deco historic precinct (ii, iv, vi); – *relevant to the Art Deco movement*
- Slovenia: The timeless, humanistic architecture of Jože Plečnik (i, iv) – *discussed under the Art Nouveau movement*

Other bodies of work not included on the World Heritage List or Tentative Lists are those of:

- Ludwig Mies van der Rohe
- Walter Gropius
- Alvar Aalto

II. The Comparison of Properties and Outstanding Universal Value

Thus, the comparison will be made to the following eleven areas of study. These include both architectural movements and bodies of work, which are discussed at the appropriate chronological point. It should be understood that there is some overlap between the bodies of work and the movements, and that some bodies of work may be related to more than one movement.

- Art Nouveau, Secessionstijl, Jugendstijl, and Modernisme
  - Antoni Gaudí
- The Arts and Crafts Movement (in Great Britain and the United States)
- Expressionism (and its antecedents)
- Dutch Modernism and De Stijl
- Art Deco
- The Modern Movement, including American Modernism
  - Le Corbusier
  - Ludwig Mies van der Rohe
  - Walter Gropius
  - Alvar Aalto

ART NOUVEAU, SECESSIONSTIL, JUGENDSTIL, AND MODERNISME

Attribute 1: A fundamental difference exists between the work of Frank Lloyd Wright as exemplified in this series and that of Art Nouveau and its allied tendencies: in the latter the focus is on ornament, whether applied to surfaces or generated by structure. Wright's work, in contrast, focused on a new definition of form and space, from which ornament is an outgrowth, an integral part of a conceptual whole. In Art Nouveau the whole of the form is often engulfed in ornament as in the sinuous and delicate work of Victor Horta, exemplified by his Major Town Houses in Brussels. There the ornament is applied to curving biomorphic surfaces. Henry van de Velde, another Belgian, used ornament to achieve "harmony and equilibrium" in his work in which the "ornamental motif becomes an organism." In the work of both Horta and van de Velde, ornament is not integral to the form as in the work of Wright. In a somewhat different approach, Josef Hoffmann in his 1911 Palais Stoclet in Brussels used ornament that is linear, as did Wright in the earlier Unity Temple. Hoffman's cubic forms are outlined with continuous strips of gilded metal, emphasizing its weightless effect rather than its volumes. At Palais Stoclet line and surface are what matter, in contrast to Wright's work, wherein wood striping unifies and expresses the abstract volumes in the sanctuary of Unity Temple and the ceilings of the Prairie houses. Undoubtedly, the most original of the practitioners of Art Nouveau was Antoni Gaudí. In his work ornament is generated by structure and goes beyond dependence on line to create curving, undulating, and brightly colored, organic constructions discussed in greater detail below.

A number of the Art Nouveau architects sought to create more open plans. Horta used iron, which had previously been limited primarily to industrial use, on a much smaller scale in his work not only decoratively but structurally to enlarge and open interior spaces. Wright's open plans, however, with their interpenetrating volumes and seamless connections with exterior space changed the very nature of the house as it was understood through history.

The more formally abstract nature of Wright's work may have been foreshadowed by Joseph Maria Olbrich's Secession Gallery (Vienna, 1897). It shares certain abstract formal qualities and a conventionalization of ornament; however, the differences are striking. While Olbrich was retreating from the decorative richness of Baroque Vienna in search of new forms, this building retains strong vestiges of classicism in its bilateral symmetry, its axially aligned main entrance, its static interior space, and its restrained play of ambiguous surface planes and bas-relief decoration. In contrast, Olbrich's designs (erected posthumously) of artists' houses as well as model homes for the middle class for the Darmstadt Artists' Colony on the Mathildenhöhe (Darmstadt, 1901-1914), show an attempt to shift away from

elaborate villa designs to more sober middle-class housing. Nevertheless, neither the form nor use of ornament express the emphatic embrace of modernity seen in Wright's work of the same period. The work of Slovenian architect Jože Plečnik represents a bold departure from the Secession style of Olbrich. Of particular interest is his innovative use of poured-in-place reinforced concrete and church architecture such as the Church of the Most Sacred Heart of Our Lord in Prague. His Church of the Holy Spirit (Vienna, 1912) was seen as a radical departure from traditional ecclesiastical architecture in the way it transformed the conventional Greek cross plan into an approximate square, to create a link between the congregation and the altar. Plečnik, as did Wright, in the slightly earlier Unity Temple, took advantage of the structural capabilities of reinforced concrete to eliminate columns, creating a great open worship space. The façade, however, is that of a somewhat abstracted classical temple and lacks the radical abstraction seen in works like Unity Temple. The ensembles of his urban landscapes in Ljubljana, with bridges, gates, street furniture, and building additions, are not comparable to this attribute.

Attribute 2: Both Wright and the practitioners of Art Nouveau turned to nature as the source of a new architectural language that decisively breaks with academic tradition. Art Nouveau was more literal in its borrowings of flowing, natural ornament resembling living plants whereas in Wright's work, nature is the source, but its particulars were always abstracted as in plant-based patterns of art glass or the rectilinear concrete ornament at Hollyhock based on the hollyhock flower. Lastly, both Wright and Art Nouveau shared the pursuit of creating total works of art, or Gesamtkunstwerk, with architecture and the decorative arts including art glass, furniture, decorative objects, and textiles fully allied. Olbrich's works in the Darmstadt Artists' Colony are exemplars of this concept in their coordination of architecture, interiors, furnishings, and applied arts. In Wright's work these elements (as well as lighting) are integral to the architecture. In his use of materials Wright sought to express their intrinsic nature both in application and finish. Thus concrete is used in ways that express its compressive nature as at Unity Temple or its plasticity as at Fallingwater and the Guggenheim Museum. At Unity Temple, it was left unpainted and natural, much as Plečnik did in his Church of the Holy Spirit. Wright's stone masonry is used in a manner to suggest the way it appears in nature, horizontally laid and uneven. Steel and iron are painted red to suggest their origins as a product of iron ore forged in fire. In contrast, at Palais Stoclet the walls are clad in thin sheets of marble too large to be mistaken for true load-bearing masonry, and its lavish materials contrast with Wright's use of ordinary ones. Wright also chose a limited palette of materials, color, and often a single geometricized design motif to further unify his work.

Attribute 3: Both Wright and the architects of the Art Nouveau sought to replace the aesthetic impotence of historicism with new forms they deemed "modern" and appropriate for forward-thinking clients. However, the congruence of lifestyle and architecture began with the ground-level houses designed by Wright. The availability of land in America allowed for terraces, and ponds that could be tied imperceptibly to the interior space, entirely avoiding the hierarchical terracing typical of European villas. Both Wright and the practitioners of Art Nouveau looked to Japan, transforming Asian ideas and traditions to fit their design goals. However, Wright, in contrast to those working in the Art Nouveau vein, sought to incorporate modern technology in his work, including the first use of air conditioning in an office building and innovative systems of heating and air handling appropriate to the climatic extremes of the American Midwest.

THE WORK OF ANTONI GAUDÍ

Attribute 1: Both Antoni Gaudí and Wright had highly personal idoms and created a new formal and spatial language of dynamic organic forms. Wright employed geometric abstraction, shifting planes, and cubic forms as well as the dramatic cantilevers we have come to associate with the twentieth century. Although structurally innovative, Gaudí's complex and highly decorated forms stand in striking contrast to Wright's simplified and abstracted ones. The undulating curves and exuberant naturalistic ornament of Gaudí's forms have an air of the fantastic, a sense of emanating from another time or place. In his early work, the organic ornament is superimposed on the buildings but in later ones such as the Church of the Sagrada Familia (Barcelona, begun 1883) and Casa Batlló (Barcelona, 1907) and Casa Milà (Barcelona, 1912) the organic forms constitute essential structural elements and in that sense, like Wright's ornament, it is integral. Nevertheless, whether applied or integral, Gaudí's forms are somewhat cacophonic compared to the quiet repose and sheltering comfort typical of Wright's buildings.

Spatially, Gaudí's interiors, like Wright's, are dynamic and structurally innovative, but Gaudí's are organic compositions that mirror the curving, or undulating forms of the exteriors whereas Wright's spaces are rectilinear open plans with interpenetrating geometric volumes. Often highly decorated and colorful through the use of broken shard mosaics, as at Casa Batlló, Gaudí's curving organic forms extend to woodwork, shaped windows, carved ceilings, and even stone columns. His remarkable engineering skills are seen in many works including the Sagrada Familia, where the form of the towers was derived from his study of natural weighted shapes, in contrast to Wright's abstract and cubic Unity Temple or the soaring roof of his First Unitarian Meeting House (Madison, Wisconsin, 1951). Casa Batlló and Casa Milà were similarly innovative, employing parabolic, hyperbolic, and catenary masonry forms and inclined columns, also developed through weighted models in his workshop. In Casa Milà an innovative pillar, column, and beam framework sustain

all of the building's weight, allowing the apartments to be open spaces (though later partitioned). In contrast, in Wright's works of the same period such as the Robie House, the main living space has a rectilinear open plan whose main characteristic is its simplicity—a single room, comprising a living and dining space, divided only by a central chimney and open stairwell. Doors and windows flood the interior with light to achieve a dynamic balance between transparency and enclosure. At Unity Temple, the dynamic quality of the interior space is complex but based on a repeated cubic geometry. Later Wright explored the potential of the circle as the basis for form, as with the Guggenheim Museum, a work that maintained a strong geometric abstraction and occurred in a much later cultural context.

Attribute 2: Gaudí's formal expression, like that of Wright, was derived from nature. Both architects translated what they observed in nature, but Gaudí's forms tend to be more direct stylizations of those of the natural world, while Wright abstracted nature's forms and employed its principles as the basis for formal and spatial concepts. Both Gaudí and Wright saw in nature a representation of the divine. A deeply religious Catholic, Gaudí believed that architecture should be a physical manifestation of the spiritual order he saw in nature. Wright too saw in nature something greater than the land and its plant forms–it was a spiritual force—a cosmic symphony in which humans, like the plants and animals, played a vital part. He explained, "Nature should be spelled with a capital 'N' not because Nature is God but because all that we can learn of God we will learn from the body of God, which we call Nature." The role of the architect was not to imitate nature directly but to formulate a method of composition paralleling that of nature, translating the process of life, growth, and development in abstract form and presenting it honestly. The Gaudí work most closely tied to the landscape is Parque Güell (Barcelona, 1914). Initially designed to be a model garden city based on the ideas of Ebenezer Howard though never fully realized, it is a large public park of fantastical forms and elements that reveal Gaudí's particular interpretation of nature, religion and the Catalonian region. Wright's Broadacre City design was also based on Howard's concepts, and while never built, it was a far more reserved plan.

From his study of the caves and rugged mountains as well as the forms of bones and reeds, Gaudí created spaces that conjure mystical grottos and surreal forests. Casa Milà, for example, seems to have a skin-like surface stretched over a curving skeletal frame, arches that suggest bent limbs and curving balconies with irregular railings that are bristly and thorny plant-like sculptures. Its undulating roof includes chimneys that are twisted, and finials topped by mythological creatures.

Gaudí's material of choice was stone, but he also used brick, iron, stained glass, and ceramic fragments to create colorful and lively mosaic decoration. In contrast, Wright's use of color is restrained and drawn from what he found in nature, and his treatment of materials is designed to express its intrinsic qualities. The difference in the handling of materials is particularly evident in stone masonry: Wright's is rough and uneven as it appears in nature; however, Gaudí's stonework is refined, and carefully carved and shaped into forms that in many ways seem to contradict its nature as a compressive material. It instead appears plastic, as if it is stretched or molded like concrete.

Attribute 3: Most of Wright's domestic work was designed for the large American building lot and a more casual lifestyle. In contrast, Gaudí's work was designed for tightly developed urban settings and more formal cosmopolitan living. Nevertheless, Gaudí incorporated many innovative features for city dwellers in his work. Casa Milà, for example, had what may be the first underground ramped parking garage with spaces for all the building's residents, an inventive ventilation system, interior patios, and exterior balconies, and a common roof terrace. Finally, both Wright and Gaudí drew inspiration from other cultures. Wright looked to ancient indigenous architectural traditions as well as Japanese ones, but his purpose was to produce from them a nationally appropriate architectural language. Gaudí sought inspiration from other cultures as well, especially in his early works such as Casa Vicens (Barcelona, 1888), which reveals medieval and Arabic influences, and in the interiors of Palau Güell (Barcelona, 1888) of a few years later with elements suggesting Gothic and early Muslim traditions. These were, however, synthesized into Gaudí's highly personal and idiosyncratic style.

THE ARTS AND CRAFTS MOVEMENT (IN GREAT BRITAIN AND THE UNITED STATES)

Attribute 1: Wright's work also bears comparison to both the English and American Arts and Crafts Movements of the late nineteenth and early twentieth centuries. The Arts and Crafts Movement was deeply rooted in preindustrial folk traditions, to which its buildings make overt reference. The domestic works tended toward a medievalizing vocabulary in which aspects of vernacular design were emulated to suit what the proponents saw as a good and simple life. The works of Charles Francis Annesley Voysey, Charles Ashbee, and Edwin Lutyens were admired by Wright as well as by many Europeans. Herman Muthesius, an attaché at the German Embassy in London who undertook a comprehensive study of the English house, praised its simple, well-designed functionality and encouraged his compatriots to follow the English example which, like Wright, pursued a rhetorical simplicity and an elimination of Victorian clutter and complexity. However, in some work such as that of Voysey, the rooms are small and enclosed in feeling. Wright, on the other hand, created a more progressive new order in pursuit of open and spatially cohesive forms.

A prominent designer in this vein was Charles Rennie Mackintosh, whom Nikolaus Pevsner once described as "the European counterpart of Frank Lloyd Wright." Mackintosh's sharp interplay of wall planes and surfaces, and celebration of functional elements such as the chimney, was known to be influential especially with the Viennese avant-garde. Mackintosh's stark tall forms and irregular window placement, however, contrast with Wright's warm materials, horizontal forms, and rhythmic fenestration. While Mackintosh clung to tradition and handcraft, Wright was more adventurous, employing cantilevers and championing the machine and modern technology. In Wright's work, the interior space is anticipated by the exterior forms. The more complex exterior forms of Mackintosh's domestic work, however, conceal the interior spatial arrangement. Lastly, both used contrast to achieve psychological depth and experiential intensity. In Mackintosh's domestic work it is achieved by contrasting austere and rugged exterior forms with beautiful and serene interiors, while in works such as the Glasgow School of Art library, the severe exterior contrasts with the rich and geometrically complex interior, which in that respect recalls Unity Temple. Wright achieved the same emotional impact through spatial manipulation in the use of compression and expansion and light and dark as one progresses through the building. Mackintosh's Glasgow School of Art may have influenced Wright, particularly the way in which it responds to its hillside location and its series of spatial progressions, a topological condition Wright addressed through much of his career. Mackintosh, like Wright, was concerned with simplification of form and elimination of historic ornament. However, Wright's focus was always on openness, spatial interpenetration and suggestions of levitation through the use of the cantilever.

The United States paralleled Britain in its search for a domestic architectural model appropriate to its culture, one that reflected the American affinity for functionalism. Wright's earliest work, such as his Home and Studio in Oak Park, Illinois, draws formally and spatially from the Shingle Style and the work of such masters as Bruce Price and his Tuxedo Park (New York) houses as well as the work of McKim Mead and White and H.H. Richardson. However, it was with the development of the Prairie house around 1900 that he achieved a coherent synthesis, a personal style, and a modern architecture that was different from anything being developed elsewhere in the United States or abroad.

The Prairie Style, which grew out of Arts and Crafts ideas, had many American followers in whose work Wright's influence is evident. They included those who worked in Wright's Oak Park office: William Drummond, Barry Byrne, and especially Walter Burley Griffin, and Marion Mahony Griffin. Following Walter's successful bid to design the new Australian capital at Canberra, the Griffins would go on to interpret Wright's ideas there with works like the Cheong House at Castlecrag, a community they designed in New South Wales during the 1920s and 1930s, which was notable both for its connection to nature and native stone construction. Others like Creswick employed Griffin's patented "Knitblock" system, an outgrowth of Wright's textile block system. The Griffins last work was the Prairiesque Coppins Estate (1935). While their formal language and use of materials are often comparable to Wright's, neither they nor any of the others among the Prairie School achieved the spatial dynamism of Wright's work on a consistent basis.

Other American architects working in the Arts and Crafts vein, especially those in California, took a different approach from Wright's Prairie houses. Of particular note are Henry Mather Greene and George Sumner Greene whose work occupies an important niche in the American Arts and Crafts Movement. Their personal style shares many of the same characteristics of overall horizontality; low pitched roofs with deep eaves; windows placed in a series; exceptional art glass; as well as a nod toward spatial openness. Wright's open plans, in contrast, are remarkable for their abstract simplicity when compared to those of the Greenes. Another prominent California architect working in the Arts and Crafts vein was Bernard Maybeck. Maybeck and Wright both employed concrete structurally; yet in Maybeck's First Church of Christ, Scientist (Berkeley, California, 1910), he used structural concrete piers together with wood, industrial sash windows, and asbestos panels framed with Gothic detailing in an eccentric coupling of historicism and modernity. The result is a church that is structurally as non-traditional as Unity Temple but whose complex Gothicized elements add an air very different from that of Wright's more abstract work which relies on movement and contrast to evoke an emotional response. Ultimately, the legacy of the Greenes and Maybeck is one of artistic beauty embedded in the handcraft tradition of the Arts and Crafts Movement, whereas Wright's early work was a forerunner of the modern aesthetic which embraced the machine as a source of design.

Attribute 2: The Arts and Crafts Movement in the United States, including the Prairie Style, paralleled that of Britain in its aspiration toward a sense of fitness and commodity that mirrored that of nature. Voysey's houses, for example, employ deep eaves as compositional devices and to counter the climate much as they do in Wright's Prairie houses. But Voysey connected the buildings to their settings through the eaves, along with the sloping chimney masses and buttresses. Wright, in contrast, employs horizontality and ground level mass to achieve the same end. Wright, Voysey, and Mackintosh all shared a belief in the honest expression of natural materials. Mackintosh, however, held that modern materials, such as steel and glass, "will never worthily take the place of stone because of this defect, the want of mass." Wright in his desire to create more open and structurally dramatic forms did not hesitate to used reinforced concrete and steel. The architects of the Arts and Crafts Movement also treated their construc-

tions as total works of art with all of the decorative elements in harmony with the architecture. Likewise, in both America and Britain there was also a mutual embrace of the concept of Gesamtkunstwerk in which all the elements of a building—furnishings and decorative art—work together to create a unified whole. Many Arts and Crafts practitioners, however, rejected the machine in favor of handcraft. Though wary of its potential to de-humanize if not controlled, Wright embraced the machine, arguing that modern wood-working equipment would make construction more cost-efficient and ensure a consistent standard of quality thus enabling us "to wipe out the mass of meaningless torture to which wood has been subjected since the world began." Ultimately, the ideals of the Arts and Crafts concerning functional planning, and the integration of art and life in an environment close to nature, rather than their approach to form or space, were what Wright absorbed into his work.

Attribute 3: Alarmed by the impacts of industrialization on modern life, members of the Arts and Crafts Movements sought to recapture some of the romantic qualities of pre-industrial times. In their search for models, they found inspiration in earlier Gothic as well as vernacular forms. Mackintosh looked to traditional forms such as the baronial castles of Scotland, as did the Americans to Gothic forms and to traditional Japanese sources. The work of the Greenes and Wright both reference Japanese building traditions, although the influence is more overt in works like Greene and Greene's Gamble House (Pasadena, California, 1909), which uses both Japanese timberwork and decoration. Lastly, the Prairie house, though an outgrowth of the movement, was not an exercise in looking backward; instead, Wright sought new forms and technologies appropriate to the pace and desires of modern life in the industrial age while still retaining an appreciation for the primacy of the individual.

EXPRESSIONISM (AND ITS ANTECEDENTS)

Attribute 1: Wright's early non-residential designs (Unity Temple and the now demolished Larkin Company administration building and Midway Gardens) can be compared with the European tendency toward a more formal, classicizing architecture such as that of Peter Behrens for the Allgemeine Elektricitäts-Gesellschaft during the late 1900s and early 1910s. However, the symmetry and axiality that organized Wright's larger projects draws from Beaux-Arts practices, while completely rejecting overt classical attributes, and nothing in Wright's work pays direct homage to the machine, as Behrens' work increasingly did. Later, Behrens' remarkably expressive four-story entry hall of the head office of the I.G. Farben Dye factory (Frankfurt-am-Main, 1921) with its corbelled brickwork has something of the transcendent power of Wright's interior for the Imperial Hotel (Toyko, 1919; demolished 1968).

Behrens' search for an expressive style was carried further by a number of architects whose work between 1910 and 1925 is termed Expressionist and does not readily fit into other movements. Within Expressionism, the work ranges from strains that are free-flowing and organic, to those that are relatively restrained and functionalist. For the most part, however, its formal characteristics are an immediate impact, a sense of organicism and in some, a spontaneous, almost improvised, quality. Among the notable figures in Holland was Michel de Klerk, who, influenced by the medievalism of William Morris on the one hand, and the freer and more original work of Wright on the other, created a new vernacular of modern architecture. In his Spaarndammerbuurt housing development (Amsterdam, 1916), the influence of Wright is especially evident in its overall formal unity, tendency toward horizontal layering, and dynamic form. In Berlin, Hans Poelzig's Großes Schauspielhaus (Great Playhouse) of 1919, employed a series of pendant forms resembling stalactites, which under certain lighting conditions created a space that looked like an enormous grotto resulting in a strange yet powerful organic form utterly different in expression from anything by Wright.

In contrast, Hugo Häring, believing that each building should be uniquely developed according to the specific demands of the site and client, took Louis Sullivan's maxim "form follows function" literally by studying patterns of movement through space together with the functional activities contained within. His Cowshed (Gut Garkau, Germany, 1925), employs abstract geometrized forms, though the overall effect is somewhat fragmented compared to the more composed and rectilinear work of Wright. Nevertheless, it is remarkably prophetic of much of the functionalist architecture that would follow. Of all the German Expressionists, Erich Mendelsohn's interest in the poetics of space, was more aligned with Wright than the movement's more functionalist proponents. His futuristic Einstein Tower (Potsdam, Germany, 1921) is a completely original and strangely biomorphic work notable for its fluidity of form, sense of movement, and symmetry. It could not, however, be more different than Wright's orthogonal work. Subsequently, Mendelsohn's work, including his Hat Factory (Luckenwalde, Germany, 1921) and Schocken Department Store, (Stuttgart, Germany, 1927) is more rectilinear and restrained in a way that parallels Wright.

Attribute 2: In the work of Wright the connection to nature can be direct, metaphorical, or both. The Expressionists' work, though it contains some similar elements, does not make a connection to nature in a similarly sustained or philosophical way. Perhaps closest to Wright's approach is de Klerk's Spaarndammerbuurt development. Natural brick is used to unify the forms as terraces stretch out above street level to connect occupants to the outdoors. Interestingly, de

Klerk's rendering of the development seems to borrow from Wright the image of vegetation spilling over the terrace parapets, which softens the impact of the forms by connecting them to nature. In Mendelsohn's sketch for the Einstein Tower the form is organically unified as the dome-topped tower appears to grow out of its ground-hugging base. However, the tower seems isolated, without context, and could be anywhere. Materially, it appears to express the natural fluidity of concrete but most of it is actually brick covered with plaster. The Expressionism of the Austrian Rudolf Steiner contrasted dramatically with that of Wright as well as the Dutch and Germans. His first Goetheanum in Dornach, Switzerland, was a building with two domes surrounded by houses that resembled boulders. After it burned, he erected the second Goetheanum (1928), a large community building which holds an auditorium, library, and meeting rooms. An imposing work with faceted walls sculpted in concrete, its form suggesting a huge rock.

Attribute 3: Expressionism was in many ways a reaction to the psychological trauma of World War I. Many architects turned to classical forms in their effort to recapture a sense of order in an otherwise fractured world. Others like the Expressionists seized the opportunity to rebuild through experimentation with modern materials in the creation of new spatial concepts and dynamic forms, which they felt offered a vision of hope while also reflecting the fast pace of contemporary society. By and large, they did not turn to exotic sources for inspiration, but to their imaginations. Mendelsohn in his search traveled to Chicago where, impressed by the horizontality of Wright's buildings, their repose, and sense of harmony, he commented, "Contemporary man, and the excitement of his fast life can only find balance in the stress-free horizontal." Upon his return, he abandoned the sculptural form epitomized by the Einstein Tower in favor of horizontal ones.

NOTE: *Both Walter Gropius and Ludwig Mies van der Rohe were to pass through an Expressionist phase, which will be discussed below separately.*

DUTCH MODERNISM AND DE STIJL

Attribute 1: The Dutch artistic movement founded in 1917 and known as De Stijl was the first radical break in modernism to be utterly non-referential in its vocabulary. Influenced by Cubist painting, abstraction would become for them a tool of revelation. They rejected Expressionism as passé, a product of an era of individualism and handcraft, but also saw Wright as one of their beacons toward the future.

For the De Stijl of the late teens and early twenties Wright was a major influence, likely as a result of seeing his work in the Wasmuth portfolio. One member of the DeStijl group, however, Robert van 't Hoff, upon seeing the Wasmuth volume, decided to go to Chicago and look at the work himself. His reinforced concrete Villa Henny (Huis ter Heide, Netherlands, 1916) the first important De Stijl structure, clearly has Wrightian elements including dominant horizontal lines expressed through bold wood striping as in the Willets house, a horizontal series of windows, and abundant terraces as in the Robie House. Its strict bilateral symmetry, concrete construction, and flat roof with deep eaves are all reminiscent of Unity Temple.

The impact of Wright's work on the architect Jan Wils was also considerable, especially Wright's open plan spatial concepts. His study of Wright led him to his first Prairie Style design (1917), for a pavilion for the municipal park in Groningen, which in form is deeply indebted to the Robie House. Wils wrote that in Wright's work interior space is reflected in the exterior view. He employed the concept in his development of what he called "closed" plasticity in which volumes advance and recede on a purely constructional basis. While based on a Wrightian method, Wils' asymmetrical compositions appear more monolithic and cubic than those of Wright.

Arguably the most prolific of the young Dutch Modernists with over 200 built works, was Willem Marinus Dudok. Dudok was influenced by the work of Wright, as depicted in the Amsterdam School publication *Wendingen*. Dudok was not, however, a mere copyist. He was able to digest and reinterpret many of Wright's forms and principles into an architectural language of sophisticated sculptural forms that was widely influential in both the Netherlands and Great Britain. His public projects such as his Dr. Bavinck School (1921), Michelers School (1925), Valerius School (1930), and the "13th Housing Complex" (1929-1930), all in Hilversum, are non-traditional, low, horizontal compositions that recall Wright's Prairie architecture in their massing, series of horizontal windows, and occasional rounded arch brick portal, borrowed from Wright projects such as the Hurtley House. Dudock's most significant work, the monumental Hilversum Town Hall (1931), is a balance of form and function. Reminiscent of Wright's Larkin Building and Unity Temple, its brick cubic forms of differing heights intersect and are balanced by a tower creating a harmonious sculptural composition.

Gerrit Rietveld's 1924 house for Truus Schröder in Utrecht Netherlands shows the influence of Wright in its conception of form and space. Neverthess, in the Schröder House, the notion of the house as a container of space is made ambiguous through its displaced wall and roof planes, pieces of brightly painted structural steel, and by the flexible nature of the principal living space. However, the Schröder House, compared to the work of van 't Hoff, Wils, or Dudok, is more grounded in Cubism and less imitative of Wright.

Attribute 2: In their manifesto of 1918 members of the DeStijl called for "removing the restriction of natural forms," which they saw as a barrier to the "expression of pure art." Their knowledge of Wright had come via publications such as those by Wasmuth. In relying on published images and because of their own preferences for line and plane, classicizing severity, and the abstract manipulation of space, they seized on Wright's abstract geometricizing of forms. What they seem to have missed or ignored, was its integration and connections to the processes of nature. Van 't Hoff, however, who saw the work first hand, seems to have understood its importance as evidenced by his Villa Henny which included abundant terraces to connect with nature, and landscaping including a pool, perhaps influenced by that at the Coonley House, all to connect with the setting. Others such as Dudok would employ vegetation in the manner of Wright to soften their otherwise severe forms. However, Reitveld's work, while still predicated on the concept of Gesamtkunstwerk, is free of any biological analogies.

Similarly, in the work of those where the influence of Wright is apparent, materials such as concrete and brick are handled in ways that express their intrinsic qualities. Brick, in particular, is employed to convey solidity and texture, though the result expresses greater austerity than in the work of Wright. Retiveld's handling of materials, on the other hand, denies any connection with nature as, regardless of material, everything is painted gray or white accented by bright primary colors and black.

Attribute 3: Unlike Wright whose work was predicated on the primacy of the individual, the De Stijl sought an equal balance between the "universal" and the individual, which they contended brought them in closer alignment with the realities of modern life. Indeed, they saw tradition and the pre-eminence of the individual as standing in the way of their socially oriented agenda. Nevertheless, they adopted many of Wright's techniques that were associated with modern living including the open plan of the Prairie house, which Jan Wils contended was more suitable for modern living because it allowed free movement throughout the house. Others such as Robert van 't Hoff were eager to incorporate American technologies including central heating.

ART DECO

Attribute 1: Some of Wright's California work of the early 1920s can be compared to Art Deco. Although Art Deco is generally associated with the Exposition Internationale des Arts Décoratifs et Industriels Modernes held in Paris in 1925, Wright's work just prior to 1925 seems to prefigure aspects of the movement, particularly in its theatricality, sense of escapism, and use of stylized ornament. However, a significant difference is that the manipulation of form and embellishment in the Wright buildings is a direct outgrowth of an underlying geometric order that governs all aspects of the design, a characteristic not generally found in Art Deco which, in the United States at least, relied heavily on Beaux-Arts composition that underlay its characteristic applied decoration. In Hollyhock House and the textile block houses, Wright abandoned the formal vocabulary of the Prairie house for something new. Hollyhock House is an elaborate weave of spaces composed of oblong solids, piers, retaining walls, and parterres of the amphitheater, which captured the atmosphere of Hollywood at the time. The textile block houses reveal Wright's continuing engagement in technological experimentation and standardization in housing design. Walter Burley Griffin and Marion Mahony, working in Australia at about the same time, developed a similar concrete block system of construction they called "knitblock." However, in their system the blocks themselves are rather plain compared to Wright's more expressive textile blocks. The later S. C. Johnson Administration Building in Racine, Wisconsin, bears some affinity to streamlined Art Deco or Art Moderne typical of factories and laboratories of the period in its rounded corners and horizontal form emphasized by different colored brick. The streamlined quality continues on the interior in the horizontal layering of trays and innovative bundled tube lighting made of the same material as test tubes and befitting a company whose products are based on chemistry.

Attribute 2: Though flattened and stylized plant-derived ornament was frequently seen in Art Deco works, at Hollyhock House the ornament is not applied but integral to the building and intended to deepen the relationship of the building to its regional setting in ways that the "exotic" applied motifs of Art Deco, used regardless of—and often in deliberate contrast to—their setting, do not. Although the exteriors of the California houses can appear massive and forbidding, their interiors, in contrast, are surprisingly intimate, evocative spaces. The materials: concrete, wood, and art glass are used in ways that express their inherent qualities. At Hollyhock House the flower motif echoes throughout the building in its furnishings, fixtures, and exterior plantings. Compared to overtly expressive Art Deco with its lavish materials intended to express the luxury, glamour, and dynamism of the Jazz age, Wright's work, in contrast, is almost placid, its poetic beauty derived from the individual features of the natural settings. On this point, the California houses can again be compared to the work of the Griffins especially their design for Castlecrag, a garden community of the 1920s and 1930s in New South Wales, in which a primary goal was the creation of an architecture that was sympathetic to the distinct characteristics of the Australian landscape.

Attribute 3: Hollyhock House and the other textile block houses in southern California were designed as an expression of the indigenous cultures of the American southwest and Mexico, particularly recalling Maya architecture in the Yucatan. While Art Deco certainly made use of decorative inspirations from other places and cultures, including Asia, Egypt and Mesoamerica, this use was primarily through decoration applied to traditional forms and was not architecturally transformative in the way that Wright applied regional inspirations. Wright's California houses are also unique as a modern response to a specific climate with their flat roofs and rooftop terraces conducive to outdoor living.

THE MODERN MOVEMENT, INCLUDING AMERICAN MODERNISM

Attribute 1: During the interwar decades of the twentieth century, the need for architecture to reposition itself both formally and in society took hold, especially in Europe. Through their various publications and manifestos, the proponents of the Modern Movement expressed faith that a better future for the majority of people, not just the elite, was achievable through modern technology. Most important, the new architecture was based on rational thinking and a commitment to functionality. Its characteristics included: rejection of tradition, formally and spatially, in favor of simplified asymmetrical compositions and flexible plans; rejection of ornament and historical references; use of cubic and/or cylindrical shapes; use of reinforced concrete, usually painted white or cream; and increased use of glass in steel framed windows, often in horizontal bands. Wright's work shares a number of these characteristics, including the innovative use of reinforced concrete in Unity Temple, the textile block houses, Fallingwater, Price Tower, and the Guggenheim Museum. However, unlike the very simplified cubic forms of many European Modernists, in the majority of Wright's work abstract forms interlock and overlap, and the overall composition is enhanced by the use of cantilevers. Interior volumes are stretched horizontally, and planes slide past each other. In plan, Wright's work is symmetrical and open, enabling easy movement. But the plans are not as flexible in terms of use as are the more neutral spaces of the Europeans. Indeed, each function, such as dining, study, relaxing, and conversation, has its appointed place, often reinforced through the use of built-in furniture, which Wright claimed help to "client-proof" his buildings, a practice both Richard Neutra and Rudolph Schindler adopted. For most of the other Modernists, space and structure were often treated as functionally independent; thus partitions without columns were often employed in their abstract and flexible spaces. For Wright, however, the organic unity of space and structure was a primary principle; form in Wright's structures creates space or is created by it. Lastly, unlike the Europeans, who, beginning with Adolf Loos, denounced any form of ornament, Wright never fully rejected ornament (although at Fallingwater he came close). Moreover, in his work, it was always integral to the design.

While the work of Modernism's leading form-givers, Le Corbusier, Mies van der Rohe, Walter Gropius, and Alvar Aalto, will be discussed individually, a few other architects of the Modern Movement warrant comparison. Luis Barragán's architectural vocabulary owes little to the International Style of Modern architecture or the organicism of Wright. However, he did share with Wright a concern for beauty and emotion in architecture, writing, "I believe in an emotional architecture. It is very important for human kind that architecture should move by its beauty." The house and studio in Mexico City, which he designed for himself in 1948, celebrates the solidity of the wall as fundamental to a sense of shelter, Wright, on the other hand, contrasted open space with closed space to achieve the sense of shelter. Hans Scharoun's Schminke House (Lobau, Germany, 1933) can be compared to Wright's Fallingwater, especially its cantilevered balcony, which may have influenced Wright's design. Instead of Wright's rectilinear cantilevered terraces, Scharoun's are curved and wedge-shaped, and the building is much more transparent than Wright's work. Casa das Canoas, Oscar Niemeyer's home (Rio de Janeiro, 1952), is also comparable. Its organic form stems from its free-form curved and floating reinforced concrete roofs, which cover what is essentially a transparent pavilion with sinuous glass walls.

Niemeyer's Niteroi Contemporary Art Museum near Rio de Janiero, Brazil (1996), on the other hand, makes significant references to Wright's Guggenheim Museum. Its cantilevered kylix or shallow bowl shape is accessed by a sinuous ramp that rises toward the building and snakes its way into the principal exhibition level. An interior hexagon contains the central exhibition space, and around its periphery are galleries. The steep reverse angle of the building's outer wall and its continuous band of glazing recall the slanted outer wall and window band of the Guggenheim but re-imagined with Niemeyer's characteristic curvilinear boldness. His Museu Nacional da República (2006), a late addition to Brasilia, however, bears only a remote connection to the Guggenheim Museum. The most original reinterpretation of the Guggenheim is Alvaro Siza's Fundação Iberê Camargo (Porto Alegre, Brazil, 2008). Siza's four-story concrete building begins as a rectangle in plan, but the hypotenuse connecting the end of the short wall with the end of the long wall swells outward to contain a four-story sky lit atrium framed by curving ramps and four open tiers of galleries. Its most audacious feature consists of three enclosed concrete circulation ramps that emerge from the west end of the façade and reach across like three fingers to tie into the east end of the building thus reasserting the rectangular form of the plan. Siza has deconstructed the curvature of the ramp-derived form of the Guggenheim into an undulating façade in the grasp of function.

An important feature of the Modern Movement was a desire to address the social needs of workers impacted by the dehumanizing effects of industrialization. This concern is evident in Van Nellefabriek in Rotterdam, an enormous steel and glass structure designed by architect Leendert van der Vlugt along with engineer J.G. Wiebenga in the 1920s. In this example of Dutch Nieuwe Bouwen (modern architecture), a concern for the physical and emotional needs of the worker is evident in its extensive use of glass, which allows sunlight to enter the workplace connects workers with the outside environment. Beginning with his Larkin Building of 1903 and later in the S.C. Johnson Administration Building and Research Tower, Wright too expressed concern about the well-being of workers. However, in contrast to connecting works with the surrounding urban and industrial environment, he turned the focus inward creating a visually rich and harmonious space. Regarding his goals at the S.C. Johnson Administration Building he wrote, "…this is designed to be an inspiring place to work in as any cathedral ever was in which to worship." Although the S.C. Johnson building is more streamlined than the Van Nellefabriek, its curved forms and strong horizontals as well as interior dendriform piers and skywalk may have been influenced by similar but more functionalist elements in the Van Nellefabriek.

In the United States, a number of architects working in the Modernist idiom were influenced by Wright. Irving Gill created a number of early modern houses in Southern California. Gill had worked in the office of Joseph Lyman Sillsbee with Wright; when Wright left to join Sullivan's office, Wright hired Gill to be part of his team. Gill was interested in construction efficiency and the potential of reinforced concrete, a material he thought was especially suited to domestic designs in simple cubic rectangular forms with planar surfaces. In his Clarke Estate (Santa Fe Springs, California, 1921), he employed a "tilt-slab" technique in which the reinforced concrete walls are cast in forms lying on the previously poured floor slab, then lifted and secured in place. The result is surprisingly modern-looking in its cubic form, however, its arched pergolas and patios suggest the California Mission style.

During the 1910s and 1920s two Austrian-born architects, Rudolph Schindler and Richard Neutra, passed through Wright's office, picking up many of his architectural principles while maintaining an interest in the work of their European contemporaries. Although Neutra was in Wright's office only a few months, he absorbed many of Wright's ideas in particular those concerning the creation of a unified whole by relating the building to its setting and incorporating built-in furnishings. Schindler, on the other hand, remained in the office for several years supervising projects such as Hollyhock House while Wright was in Japan during the construction of the Imperial Hotel. Schindler did design buildings reminiscent of Hollyhock after he left Wright; then he soon developed his own style. His own 1922 King's Road House incorporates Gil's "tilt slab" construction technique with a sense of great serenity comparable to that of Taliesin. Schindler's most notable work, however, was the Lovell Beach House (Newport Beach, California, 1926), which employed five identical two-and-a-half-story reinforced concrete frames connected by three concrete slabs to support two living levels elevated a full story above a ground plane of beach sand. The genius of the design lay in Schindler's deployment of various cantilevered elements that so disrupt the regularity of the five frames that - even as the structure provides a deeply shaded entrance, sleeping porches, a garage and a two-story balconied living room—it still seems poised to challenge the nearby Pacific Ocean. Vestiges of Schindler's years in Wright's office are evident in the rhythmic patterns of the living room windows that contrast with the rough concrete surfaces. It is hard to imagine that Fallingwater was not influenced by the boldness of Schindler's concrete cantilevers.

Designed for the same client, Richard Neutra's Lovell Health House was constructed using an open-web skeleton on a concrete foundation, with broad expanses of glass in standard triple steel casements and clad with gunite. The Lovell Health House is on a hillside like several of Wright's works such as Fallingwater; however its upper stories are expanded through the use of balconies suspended by slender steel cables from the roof frame rather than cantilevered and its overall cubic form suggests European modernism, instead of the work of Wright.

R. Buckminster Fuller's Dymaxion House, conceived in 1927-29 but not constructed until 1945 in Wichita, Kansas, is a circular metal house with an open living plan. Suspended from a central mast, it weighed 1,360kg, and could be folded up and transported to any building site; it was somewhat evocative of then-popular conceptions of flying saucers. While, like Wright's Usonian houses, it addressed the need for affordable single-family housing through prefabrication, most of Wright's domestic work was orthogonal in form and anchored to the earth, without the futuristic quality of Fuller's work.

In the design of museums, the plan of Gordon Bunschaft's Hirshhorn Museum (Washington, D.C., 1974), may have been a response to the Guggenheim. In form it is a stocky concrete cylinder elevated on four massive piers that accommodates art in circular galleries on three floors. However, it lacks Wright's dynamic expression of interior space. Richard Meier's High Museum of Art (Atlanta, Georgia, 1983) contains a wedge-shaped atrium replete with skylight and four stories of curving balconies that could almost have been cut out of the Guggenheim's rounded form except for Meier's meticulous rendering of Corbusian-inspired detail.

Attribute 2: Modernists turned to the machine for inspiration, focusing on its functional purpose; to efficiently and economically meet a required outcome. Its mottoes included "Form ever follows function," an adaption of Louis Sullivan's dictum and Le Corbusier's "a house is a machine for living in." For Wright, however, a house was first and foremost a place of shelter. Its objective was not to emulate the efficiency of the machine; it was to reflect the harmony found in the natural world which in turn would enrich the life of the family who would live in it. Thus, for Wright, nature—its forms, processes, and principles—was the inspiration, and his architecture reflects the characteristics of nature in form, unity of design, and connection to setting. However, many of the efforts of the proponents of Modernism to connect the inhabitants of their buildings to nature were expressed through providing viewing platforms and terraces to experience the health benefits of fresh air and sunshine. Wright also employed terraces and viewing platforms, but he also wanted to blur the distinction between interior and exterior space. Barragan also felt an appreciation of nature was essential to beauty, and gardens were important elements in all of his work. Similarly, Niemeyer's domestic work shares with the work of Wright an effort to tie the architecture to the topography and to provide a fluid connection between interior and exterior spaces where people, air, vegetation and landscape elements coexist freely. Likewise, Schindler's and Neutra's work demonstrate a great sensitivity for setting. However, no one achieved the sublime integration of landscape and architecture that Wright did in Taliesin, Taliesin West, or Fallingwater. In urban works such as the S.C. Johnson complex and the Guggenheim Museum, as well as earlier works such as Hollyhock House, he brought nature inside through pools, indoor planters, and skylights to create spaces that suggest the natural world with light and the sound of water. However, when designing works in natural settings, he sought a deeper connection to the specifics of place and to weave the characteristics of the site throughout the architecture by using terraces, unusual and surprising perspectives, and paths of movement designed to heighten the experience, as in Taliesin, Taliesin West, Hollyhock House, and Fallingwater.

Wright also embraced modern materials such as concrete, glass, and steel. However, unlike some of the Modernists, he never abandoned natural ones, notably wood and stone, which he saw as necessary foils to those created through manufacturing. Moreover, when he used concrete or steel, he expressed their inherent qualities in the way he handled them and symbolically through color. For many of the modernists color was important, but unlike Wright's unvarying use of warm natural tones, their colors were often vibrant to enliven what might otherwise be sterile spaces. Wright also praised the importance of glass in enabling transparency and connecting buildings to their settings, but he did not try to pretend it was not there as later Modernists did, and expressed it through framing.

Attribute 3: In 1926, Hannes Meyer, the one-time director of the Bauhaus, wrote: "The surest indicator of a true community is that it meets the same needs with the same means ... Standardized form is impersonal." Walter Gropius wrote something very similar: "On the whole, the necessities of life are the same for the majority of people. The home and its furnishings are matters of "mass demand," and such demand should be satisfied by machines capable of producing standardized products." These words express a basic idea of Modernism leading to a uniformity that was understood as essential to serve the majority of people in a burgeoning world population. Thus, there was in Modernism a rethinking of concepts of dwelling in order to appeal to many types of users rather than the individual. The Berlin Modernism Housing Estates by Bruno Taut and others, and the student housing in the Bauhaus and its Sites in Weimar and Dessau (1913–1933), demonstrate recognition of the need for affordable and efficient housing and were a response to denser urban living during this period in Europe.

Beginning in the 1920s there were a number of efforts to create low-cost housing in the United States, focusing on the single-family house. Carl Koch developed the Techbuilt House between 1939 and 1953. This was a two-story gabled house in which the basement and attic are replaced by a ground floor three feet below grade and a second floor that opened to the rafters. The typical Techbuilt House was post-and-beam construction framed with broad expanses of window glass and prefabricated standardized wall panels (some brightly colored) that could be individualized by shifting the panels according to a variety of client needs or site conditions. Techbuilt houses were popular among vanguard modernist thinkers in the northeast United States, but compared to the Usonians that followed the first Jacobs House, none attained a level of outstanding architectural merit, perhaps because—despite the option of plan flexibility—their gabled roofs remained resolutely anti-modern.

In 1945, the Case Study program was announced in Los Angeles to promote affordable modern houses appropriate to the region. In response, some of California's leading architects such as Richard Neutra, Charles and Ray Eames, and Eero Saarinen designed 36 experimental prototype houses between 1945 and 1955. Though their forms varied significantly, many were influenced by Wright's open plan, use of natural materials, connection to setting, and ease of expansion.

Fuller's Dymaxion House had many innovations such as low maintenance, independence from infrastructural support, portability, self-cleaning by way of a vent system, and flexibility in room sizes. However, unlike the success of Wright's

Usonian concept, Fuller was never able to persuade the American public to inhabit a home that looked like a machine or persuade manufacturers to make and market it, in part because all of the units would be identical—in contrast to the client-centered and site-specific Usonian House. For Wright, the primacy of the individual remained paramount. He designed buildings to fit the client, not only their individual needs but their personalities. For Wright, as for most Americans, the individual house was the standard and the ideal. Even Wright's early efforts in moderate-income housing, the System-Built Houses, as well as his later Usonian houses, were designed to be individualized. He listened to his clients, to homemakers without servants who wanted kitchens that were more efficient and enabled them to supervise their children, to car owners who wanted the convenience of a carport for easy access and cost savings, and to those for whom a more casual lifestyle and outdoor living was increasingly important. Lastly, Wright, like the Modernists, rejected historicism, but Wright never completely turned away from tradition, especially that of Japanese design, an interest he likely passed on to Rudolph Schindler, whose Kings Road House employs elements of traditional Japanese house design. Wright however, was never derivative. Instead, he synthesized and recast traditions in new ways that enriched and fit his architectural objectives.

THE WORK OF LE CORBUSIER

Attribute 1: By the 1920s the Swiss-born architect and theorist Charles-Édouard Jeanneret, later known as Le Corbusier, developed a new architectural language that he believed could address many of problems facing society at the time. Stemming out his study of utilitarian buildings and standardized products he found a new vision of beauty and a new aesthetic vocabulary—the cube, sphere, and cone. His oft-quoted declaration, "a house is a machine for living in," was more about the beauty he saw in machine produced objects and how they could inform the design of the house than it was about functionality. The basis of his aesthetic was a set of five architectural principles. The first is the use of "pilotis," a grid of narrow reinforced concrete columns which replace supporting walls by lifting the building off the ground and carrying the structural load. This idea, along with another principle, "the free design of the façade," eliminates the structural function of the exterior walls enabling them to become mere screens. These two principles resulted in a major break-through as interior space could now be completely open. Almost two decades earlier, Wright, motivated by the desire to connect the house's inhabitants with nature, and provide greater ease of movement, rather than the wish to emulate machines, achieved an equally important breakthrough by a different method. He eliminated the boxy, self-contained spaces of traditional houses, by attacking the closed interior corner to create open space. In his houses, the corners are dissolved in glass, or resolved by free-standing walls at right angles to one another, never actually meeting. Rather than expressing containment, the planes seem to slide past one another in space.

During the 1920s Le Corbusier explored his concepts through the use of elegantly spare, cubic forms raised off the ground, with walled roof gardens and horizontal bands of windows cutting through the façade along its entire length, lighting the rooms equally. The façades of his urban houses are thin screens reflecting their non-loadbearing nature. Like abstract paintings, these works stand in stark contrast to the sense of geometricized mass expressed in Wright's earth-hugging forms. There are points of similarity between Le Corbusier's work and the more cubic forms of Wright's textile block houses in California and Tulsa, Oklahoma, as well as later works such as Fallingwater. However, in all except Fallingwater, it is the use of integral ornament that distinguishes the two architects' work. To Le Corbusier ornament was anathema to his machine aesthetic. Wright, in turn, was repelled by the severe forms of Le Corbusier, which he saw as inhumane.

The interior living spaces of Le Corbusier's domestic architecture varies. His studio houses and the units in the Unité d'habitation are generally two stories high with a balcony overlooking the primary living area. An occasional freestanding partition might indicate the appropriate location for a piece of furniture or a piano, but the living space is otherwise flexible. Like Le Corbusier, beginning with the Prairie houses and through the Usonians, Wright also employed two-story living spaces with overlooking balconies. However, he also varied ceiling heights and used diagonal axes to impart a dynamic quality to his spaces. In Wright's work fully glazed doors open on to terraces, while mitered glass corners, glass scribed into stone, and a continuity of materials on the walls and floors blur the distinction between interior and exterior space. In Le Corbusier's work, glass walls slide open to connect the occupant to the enclosed roof gardens or balconies.

By the 1930s Le Corbusier's formal language, for the most part, broke away from the cubic forms based on standardization of the 1920s to a more primitive, sculptural, and organic expression best exemplified by the Chapelle Notre Dame du Haut at Ronchamp and his various designs for Chandigarh in India. While organic, these represent a very different kind of organicism than that of Wright. Le Corbusier's forms are more biomorphic; in contrast, Wright's forms remain geometrical in origin.

Lastly, Le Corbusier defined a concept of architectural promenade in which space is arranged in sequence to provide differing perspectives as one moves around and through a building. At the Villa Savoye (Poissy, France, 1928), it is a stair that creates direct vertical connections and a ramp that generates a more gradual

unfolding procession into the house, synthesizing the three levels of the villa and producing direct relationships between inside and outside. For Wright the interior paths through his works employ contrast, light and dark, compression and expansion. The experience of a Wright space is visceral, whereas the experience of a Le Corbusier space is more intellectual.

Attribute 2: Nature plays a central role the architecture of Wright and Le Corbusier but in very different ways. Le Corbusier understood nature as being mathematically ordered, and believed that architecture should reflect that order and work in harmony with it. He also saw nature as more than landscape, and felt that providing access to sun, fresh air and greenery for the inhabitants of the modern city was as important as green space. His argument for lifting buildings off the ground was that the ground space would be reclaimed by the rooftop garden. However, the roof garden, although open to the sky, remains a room with walls, albeit with windows; this tends to separate the occupants from the surrounding landscape. Wright also employed raised terraces in his urban works, but where nature was at hand he aimed to make a strong connection directly to the earth by opening buildings on to ground level terraces and merging them into gardens. The reasoning behind his desire that every American have an acre of land was simple: gardening is a very direct means of cultivating a connection to the land. Moreover, nature's forms always inspired his work. He believed housing large numbers of people in buildings separate from nature would lead to spiritual and societal alienation.

Over time, Le Corbusier's thinking regarding nature evolved and in his search for form he shifted away from manufactured objects to objects that evoke a poetic reaction. These included natural objects such as bones, shells and stones as well as artifacts from ancient cultures. However, he was also not immune to the power of an exceptional landscape, to which his chapel at Ronchamp, and buildings at Chandigarh, testify in their reading and response to site and topography.

Throughout his career Wright, allowed texture and finish to reveal the intrinsic quality of materials. He also believed spaces were enriched by contrast. Particularly in domestic applications, wood was seen as an essential foil to the hard character of stone, brick, or concrete. Wright shared Le Corbusier's fascination with concrete and its plastic qualities. In Unity Temple, he left it uncoated to reveal its essential character. However, over time he realized weather is not kind to unpainted concrete. Consequently, at Fallingwater and the Guggenheim Museum, he chose to paint in a soft ochre color (later changed to white by the museum's director) reminiscent of adobe, an earthen material he saw as related to concrete. In Le Corbusier's buildings of the 1920s, it is difficult to determine what the materials are—concrete, plaster, or steel, as all are painted, and the textures are similar. Only a carefully selected paint palette enlivens the interiors. By the 1930s, however, Le Corbusier used brick, rubble stone, and concrete all honestly expressed. In his more Brutalist work the concrete was left unfinished ("béton brut,") but like the concrete at Unity Temple, it has not held up well.

Attribute 3: Wright and Le Corbusier were both concerned with the degraded quality of life inherent in the congested and dirty industrialized city. Both also developed alternatives—for Wright, Broadacre City, and for Le Corbusier, Ville Radieuse (The Radiant City). Wright's Broadacre scheme was predicated on the single-family detached home, one acre of land for the garden, and the use of the automobile as the primary means of transportation, whereas Le Corbusier's concept entailed housing people in large high-rise apartment buildings with individual balconies, surrounded by green space, and convenient to public transportation. While neither plan was realized, the affordable Usonian house grew out of the concept for Broadacre City, and a model of high-density housing, Unité d'habitation in Marseille, came out of the Ville Radieuse. Both concepts would be influential —Wright's on the suburban house and Le Corbusier's on public housing and high-rise apartment buildings in general.

Both Wright and Le Corbusier designed works that responded to what they saw as contemporary needs though their solutions differed. Wright, who was born in a time when horses provided the primary means of transportation for rural dwellers, saw the advent of the automobile as changing the nation and opening the landscape to decentralized communities. Le Corbusier saw in the machine the potential for the standardization of architecture as well as the means to a more universal language that could serve the needs of many in contemporary society and be readily adjusted to respond to the differing requirements of location and climate. Wright, in contrast, saw every situation, setting, and client as unique and requiring a unique response. Finally, while both Wright and Le Corbusier found the eclectic architecture of the period impoverished, neither rejected tradition completely. Wright was informed by Japanese and Mesoamerican traditions as well as contemporary sources, transforming them in a new, synthetic, personal style. Le Corbusier in his search for primary form turned to the Pyramids of Egypt and the monuments of ancient Rome and Greece.

THE WORK OF LUDWIG MIES VAN DER ROHE

Attribute 1: Though no single architect dominated Germany in the 1920s, the body of work of Ludwig Mies van der Rohe has been one of the most enduring and warrants comparison here. Unlike Wright, Mies van der Rohe was a man of few words. Nevertheless, with the same conciseness he applied to his work, he described his architectural method in two famous sayings, "less is more," and "God is in the details."

Mies van der Rohe recalled seeing an exhibition of Wright's work in Berlin while a young architect in 1910, which he described some years later as having a profound influence on him and his cohort, writing, "The dynamic impulse emanating from Wright's work invigorated a whole generation." This influence is visible in Mies van der Rohe's country villa projects of the early 1920s, which share with some of Wright's early Prairie houses a cross-axial plan, including a central core of rooms, extensions reaching out into the landscape, spatial flow, low horizontal form, and deep roof overhangs. However, in Mies van der Rohe's projects the form has been significantly simplified, and in some ways seems to prefigure Wright's later Usonian houses. A similar exchange may have been in evidence in his brick monument to Karl Liebknecht and Rosa Luxemburg (Berlin, 1926; demolished 1930s), which suggested elements of Wright's formal language seen in such works as the Larkin Building and elements of the Robie House. However, one could also argue that it may have influenced Wright's Fallingwater of nearly a decade later. It was in one of Mies van der Rohe's mature works, the Barcelona Pavilion (1929; reconstructed 1986), that the spatial lessons of the Robie House, its sweeping horizontal form and shifting and sliding interior planes, were absorbed and transformed into something wholly new.

Both Mies van der Rohe and Wright sought formal clarity in their work, Mies van der Rohe through what he referred to as "skin and bones construction," in which the method of construction was honestly and simply expressed as in the Barcelona Pavilion and the Farnsworth House. A clarity of form is also evident in Wright's work in the way the exterior forms express the interior spaces in examples beginning with Unity Temple and continuing through to the Guggenheim Museum. Lastly, both Mies van der Rohe and Wright sought a richness of experience in the spaces they created. Wright achieved this through contrast: light and dark, compression and expansion, rough and smooth; and a comforting sense of shelter. Mies van der Rohe, on the other hand, employed fluid space, with an emphasis on detail, elegant materials, and avoidance of contrast. The result is that Mies van der Rohe's work is understated and subtle, whereas Wright's is exuberant and dynamic.

Attribute 2: Mies van der Rohe was one of the great masters of materials, and his attention to every detail and quality craftsmanship was legendary. Mies van der Rohe, like Wright, used materials in ways that express their inherent nature. Perhaps the greatest difference between the two was in the types of materials they chose. Wright preferred common and readily available materials, wood, local stone, reinforced concrete, and concrete block. In contrast, Mies van der Rohe was perplexed by Wright's use of exposed concrete block. He preferred exotic materials of great beauty and expense: travertine, green marble, gold and white onyx, Madagascar ebonies, and chromium-plated steel. Moreover, he used them to maximum effect as at Villa Tugendhat (Brno, Czech Republic, 1930) where a translucent onyx wall in the primary living space glows when backlit by the sun.

Both Mies van der Rohe and Wright employed organic principles. Mies van der Rohe explained his approach saying, "We shall emphasize the organic principle of order as a means of achieving the successful relationship of the parts to each other and to the whole." A connection with nature was important to Mies van der Rohe, although his approach was different than that of Wright. When asked what role nature played in relation to his buildings he replied, "Nature, too, shall live its own life. We must beware not to disrupt it with the color of our houses and interior fittings. Yet we should attempt to bring nature, houses, and human beings together into a higher unity. If you view nature through the glass walls of the Farnsworth House, it gains a more profound significance than if viewed from the outside. That way more is said about nature-it becomes part of a larger whole." Wright, in contrast, sought an active rather than passive relationship with the landscape. For him it was not enough to have a view of nature. Indeed he rarely offered an obvious landscape view from within a house, thinking it would become too familiar. Thus at Fallingwater there are no views of the waterfall from within the house; instead one must journey out into the woods or down steep and slippery stairs to experience its beauty and power.

A comparison between major works by the two architects, Villa Tugendhat and Fallingwater, illustrates some of these differences. At his Villa Tugendhat Mies van der Rohe responded to a sloping site by placing the entrance at the top of the hill and carving away the hillside to make the hill frame the building. At Fallingwater, the entry is at the base of the hill. Thus, instead of the hillside serving the architecture, the architecture is fitted to the features of the site. However, at both houses, the architects indicated details they saw as critical to their designs such as the preservation of certain trees. The primary living spaces of both works also demonstrate an extraordinary connection to their setting. At Villa Tugendhat it is the delight created when the glass wall, which looks out on the garden, is lowered, opening an entire wall of the room to the exterior. At Fallingwater, a similar experience of surprise and elation occurs as fully glazed doors open on to a terrace that soars out over the waterfall below.

In works with extensive glass, Mies van der Rohe saw the reflection of the trees and shrubbery on the glass exterior as a way of connecting the architecture to the natural world surrounding it. To vary the reflections, he often set adjacent pieces of glass in their frames at slightly different angles. Wright, however, desired a more direct connection to nature through terrace doors which open out to ground level terraces and extend architectural elements into the landscape as at Fallingwater

or Taliesin. To achieve privacy in more populated settings, Mies van der Rohe incorporated courtyard gardens into his designs enabling a connection to nature for most of the house surrounding the courtyard. Wright sought a more expansive view on to the garden and in works like the Jacobs House fitted the L-shaped plan into the corner of the lot thus maximizing the available ground for the garden and opening the living spaces to it with full-length glazed doors. However, in Mies van der Rohe' urban office towers, there is little evidence of a connection with nature or natural principles other than the omnipresent geometric order of their materials, form and siting.

Attribute 3: Mies van der Rohe, like Wright, designed for modern living and incorporated open plans and modern technology. Nevertheless, neither Mies van der Rohe nor Wright employed completely flexible plans, both identifying various areas of activity through built-in furniture and furniture placement. Both treated their projects as complete works of art, designing the furnishings as well as the building. Both were also interested in incorporating modern technology for heating, cooling, and at Tugendhat, an innovative air filtration system. However for Mies van der Rohe, it was the work of art more than its functionality that seemed to matter most, as Dr. Farnsworth complained bitterly that her house was unlivable. Mies van der Rohe, like most Modernists, did not look to other traditions, such as Japan, for inspiration as Wright did. Though he did considerable work in the United States, his designs there had a universal character of modernity not specifically tailored to American culture. In the end, Mies van der Rohe was a classicist at heart, and Wright, a romantic; nevertheless, they shared similar interests and goals in their search for an original aesthetic appropriate to the spirit of the times.

THE WORK OF WALTER GROPIUS

Attribute 1: Walter Gropius began his career in Peter Behrens office where he became familiar with the work of Frank Lloyd Wright through the Wasmuth portfolio of 1910. In some of his early work evidence of his knowledge of Wright's work can be seen in buildings such the 1914 Werkbund Pavilion (Cologne, Germany) by Gropius and his collaborator, Adolf Meyer, in which the symmetrical and horizontal composition with pavilions at both ends and flat overhanging roofs are reminiscent of Wright's Mason City Bank and Hotel (Mason City, Iowa, 1909). Similarly, his more expressionist Sommerfeld House (Berlin, 1920), with its horizontal form, low pitched roof with broad overhangs, and integral wood ornament suggests the formal language of Wright. However, by the mid-1920s Gropius was expressing misgivings about what he saw as Wright's "growing attachment to romanticism...," a characteristic which for Gropius stood in stark contrast to what he saw as the central idea behind the "new architecture," which was "rationalization." For him, rationalism with its elimination of ornament, emphasis on the functions of structural members, and quest for concise and economical solutions could play a purifying role in architecture. Exemplifying his rationalist ideal was the 1926 building for the Bauhaus in Dessau. By employing a pin-wheel plan, which Wright also used in many of his Prairie houses, and abundant glass, the structure received the needed space and ample light required for a studio. The extensive glazing emphasized the form, as sometimes it was laid flush with the walls to reinforce the volumetric character of the space within, and other times recessed to accentuate the hovering horizontal forms. Under the leadership of Gropius, the Bauhaus aesthetic was established, blending abstraction and mechanization into a coherent system of expression that would be widely adopted. Nearby, his Houses for the Bauhaus Masters with their dramatic cantilevers, severe cubic forms in white accented by black painted sash, and open but austere interior spaces, could not be more different from either Wright's Prairie houses or his more exotic California textile block houses.

Lastly, Wright saw the significance of the house in almost spiritual terms. Indeed, the architectural historian Nicholas Olsberg described Wright's view of the house as "a place to grow the soul of a child." For Wright, the home was first a place of shelter for the family, but also one of comfort in which the fireplace, as the symbol of the family, played a central role. He also sought experiential richness for the dweller through contrast—spatially, materially, and in the treatment of light. Gropius likewise sought what he described as "the satisfaction of the human soul," which he claimed was "dependent on the mastery of space" rather than symbolism. Gropius's approach was rational and based on functional ergonomic and economic considerations, derived from a sense of social responsibility that underlies all of his work. For him, this was achieved through collaboration at the Bauhaus, in his practices, and later at Harvard. In contrast, Wright's work, even though he surrounded himself with apprentices, was always that of the individual artist. Thus, although there is an undeniable connection to nature underlying his "organic" architecture, there is also the passion of the artist that is impossible to fit into the confines of rationalism, and which results in work that is always personal, subjective, and highly charged.

Attribute 2: Both Gropius and Wright sought a relationship with nature in their buildings; nevertheless, their approaches differed. Gropius wrapped glass around corners and employed large glazed areas, often floor-to-ceiling, but justified the expense and associated inefficiencies primarily on functional grounds—to provide more light. He also sought fresh air and included balconies and terraces but again, principally for pragmatic reasons, to benefit the health of the inhabitants. For Wright, a connection to nature was essential not only for physical health but even more so for emotional and spiritual health. The objective of Wright's organic

architecture regardless of functional typology—house, church, office building, or museum—is to connect the inhabitants with nature and nature's principles either directly, in the integration of the building with its setting, or metaphorically, in the creation of interior environments that seek to approximate experiences of the natural world and in the unity expressed by the way the parts relate to the whole.

Gropius and Wright both spoke of using materials honestly, i.e., in ways that express their inherent nature. Gropius rarely used wood after his expressionist Sommerfeld House. The client was in the lumber business, thus the entire house is wood. There is also extensive integral cut wood ornament inside the house and on the ends of the exterior roof beams, which is reminiscent of Wright. For both architects, glass is clearly expressed through framing rather than making it seem to disappear as Mies van der Rohe was wont to do. The use of steel expresses its tensile qualities, and concrete or stucco is painted, but with color that is suggestive of its material nature. A significant difference, however, is that Wright, especially in his domestic designs, tended to balance hard industrial materials—steel and concrete—with natural ones. Gropius's aesthetic during the Bauhaus years favored industrial materials over natural ones. After his arrival in the United States, however, he seems to have become less doctrinaire; and in his own home in Lincoln, Massachusetts he employed wood clapboard in a nod to New England building practices and painted it the traditional New England white that also fit the Modernist aesthetic. However, in the Alan Frank House (Pittsburgh, Pennsylvania, 1938), his largest domestic work with 1114.85m^2 of interior space and over 465m^2 of terraced exterior space, nature plays a more important role than in previous projects. In the Frank House, Gropius along with his collaborator Marcel Breuer designed a total work of art: house, furnishings (by Breuer), and landscape. The Frank House also uses a variety of American woods and native as well as exotic stone, including travertine, all beautifully and naturally expressed. Nevertheless, the overall impression is one of somewhat aloof industrial modernity. In contrast, Wright's Fallingwater, designed just a few years earlier, expresses the immediacy and vitality of nature, the genius of the artist, and warmth of a mountain lodge.

Attribute 3: The Houses for the Bauhaus Masters and the textile block houses were practical experiments that both architects hoped would be developed into more affordable standardized housing systems. Gropius based his masters' houses on a building block principle he called Baukasten im Großen, in which standardized "blocks" could be arranged in various ways, depending on the number of inhabitants and their needs, into different "machines for living," a description he borrowed from Le Corbusier. Wright had hoped the textile block, once perfected, could replace common concrete block as an affordable and easy to use building material. However, neither system was successful. Gropius's building block system had none of the flexibility of a set of building blocks and Wright could never get the textile block concrete mix to be as durable as that of a typical concrete block. However, interest in creating affordable housing never waned for either architect. In 1927 Gropius would build two houses with entirely prefabricated wall and roof panels for the Weissenhof exhibition, and later, mass housing such as that of the Törten Housing Estate (Dessau, Germany, 1926-28) that would incorporate standardized features throughout with aspects of American assembly line production in its method of construction. Wright continued his effort with the many Usonian houses built between 1936 and 1959 to create beautiful yet affordable single-family, detached homes that greatly influenced suburban housing, particularly in the United States. Finally, Walter Gropius shared Wright's enthusiasm for Japanese architecture, writing a small book on the Imperial Villa at Katsura.

Gropius, perhaps more than his European counterparts, actively promoted the inclusion of modern features in his houses and other buildings. His "new architecture" included built-in storage, serving hatches, walk-in closets, built-in ironing boards, and even hoses to clean dishes. Together they were intended to make housekeeping more efficient. Wright too was concerned about lightening the burden for the homemaker, and created built-in kitchens which open onto views beyond the walls, eliminated the damp and dank basement, substituted the more economical and convenient carport for the garage, and provided comfortable space for outdoor living. The primary difference between Wright's approach and that of Gropius was the social implication: Gropius was seeking an all-encompassing, standardized, and modern approach that could be applied globally to fit almost any situation anywhere. Wright, on the other hand, never abandoned individualizing his work in ways that suited the unique needs of each client. Similarly, throughout his career, Wright never forsook the idea of looking to other cultures for inspiration, and when building outside of the United States in Japan he took architectural cues from their building traditions, transforming them into something completely original. Gropius, though he once commented that the simplicity of traditional Japanese house was a model for the modern house, sought his inspiration from the modern machine and industry, not other cultural traditions.

THE WORK OF ALVAR AALTO

Attribute 1: Over the span of his career, Alvar Aalto's style ranged from a Finnish National Romanticism in the early years, to a functional modernism during the late 1920s to the mid-1930s, to a more organic modernist style from the mid-1930s on. In 1929 he became a member of CIAM and was initially a follower of Le Corbusier. His early modern work such as the Turun Sanomat Building

(Tuku, Finland, 1930), reflects a main-stream modernist approach with smooth white surfaces, ribbon windows, and flat roofs. However, with the Viipuri Public Library (Viipuri, Russia, 1935) and the Paimio Sanatorium (Paimio, Finland, 1933), a shift began, as he grew increasingly concerned about the dehumanizing effect of much of the prevailing functionalism and began to seek a new path forward. Malcolm Quantrill points out that, through his study of Wright's Prairie houses, Aalto absorbed many of Wright's ideas about open planning and the free flow of space as well as the interpenetration of volumes. He incorporated these organic concepts beginning with his own house at Munkkiniemi (1936), and ultimately transformed them and made them his own. By the late 1930s with the Villa Mairia (Noormarku, Finland, 1941) the move appears complete. Instead of being purely functionalist, the work began to take on greater plasticity, becoming more human-centered, and finally, more organic.

While Wright's Prairie designs may have had a broad influence on Aalto, his careful study of Fallingwater seems to have deeply influenced his design of one of his most significant works, the Villa Mairia. It is interesting to note that his preliminary sketches for the project bear an uncanny resemblance to the Wright house, perhaps so much so that in the end, Aalto was compelled to abandon the plan. The built house, though, does share some of Fallingwater's characteristics, notably an emotionally rich experience of interior space achieved through contrast and progressive movement, and a connection to setting. At Villa Mairea, as at Fallingwater, there is a cave-like entry that leads to a few steps up and turns into an open, richly textured interior, spatially organized to give slight hints of what lies beyond. Once inside, the experience is enhanced by the use of a diagonal axis which adds a dynamic quality to the space and paths of movement. Unlike the work of Wright, however, the Villa Mairea has some biomorphic elements, specifically the roof over the entry, the projecting first-floor studio, and the pool, which do not appear fully integrated with the rest of the house. However, this fragmented quality was resolved with his New York Pavilion of 1939. With its diagonal axis, mature grasp of volume, scale, and movement, and dramatic undulating walls of joined wood poles pitched inward, Aalto achieved a complete integration of form, space, materials, and feeling. Upon seeing it, Wright declared him a "genius."

Lastly, among Aalto's many technical innovations, one that bears comparison with those of Wright is found in the Paimio Sanatorium. While formally the sanatorium exhibits a dependence on European modernist prototypes, the novel system for cantilevering its sun terraces is remarkably similar to the structural system used by Wright in his well-published St. Mark's-in-the-Bouwerie towers design (1927) for New York City and also in Price Tower (Bartlesville, Oklahoma, 1956). To describe how the system operates both Wright and Aalto used the metaphor of a tree. Each explained that their building employed a central reinforced concrete core or spine which they refer to as a "trunk." Next, they liken the foundations to "roots" which go into the earth to support the trunk, and finally both compare the cantilevered floors (Wright) or sun-terraces (Aalto) to "branches" that stretch out from the trunk.

Attribute 2: Aalto's identity, like that of Wright, was closely tied to the landscape of his native country. He also shared with Wright a belief that the principles of nature should inform design, stating, "the profoundest feature of architecture is a variety and growth reminiscent of natural life. I should like to say that in the end, this is the only real style in architecture." However, Aalto's form of organicism depended on what he called the "simultaneous reconciliation of opposites," a concept that involved a deliberate informality, and, at times, a conflict between a structure's form and plan, which can result in a fragmented and inconsistent appearance. He found the element of conflict inherent in the natural world but also in the activities of humans, which, he believed, could not be ordered through abstraction but only through a more arbitrary logic. Nevertheless, his intent was "to bring the material world in harmony with human life." And while Wright shared Aalto's desire for creating harmony between humans and the built environment, he saw the unification of the parts with the whole, not the conflict among them, as the primary means of achieving a harmonious order.

Aalto's approach to materials also bears some comparison to that of Wright. Perhaps inspired by a visit to Wright in Chicago where he saw Unity Temple, the Robie House and Taliesin, he began to employ more local materials, especially brick, wood, and stone, all of which are handled in ways that express their inherent natural qualities. In some of Aalto's work, wood poles are left with the bark intact, or the brick is laid almost playfully as if to explore the full range of its expressive possibilities. Other similarities can be seen with the work of Wright, in the way that brick is used on both the interior and exterior, helping to unify the form. In later works such as Säynätsalo Town Hall, Aalto raked the mortar joints in a way reminiscent of Wright's treatment of the brick at the Robie House. He also experimented with laying the brick unevenly to effect a play of light and shadow on the wall plane, an effect Wright also pursued in his treatment of the concrete block in the textile block houses.

A comparison of Aalto's work to that of Wright cannot ignore the role the concept of Gesamtkunstwerk plays in both. In 1930 Wright stated a principle concerning furnishings: "to incorporate furnishings into organic architecture making them all one with the building, and designing them for machine work." While both architects achieved the goal of making the furnishings one with the

building, in realized form, they could not be more different. Wright's furniture reflects the strong geometry he applies to his buildings and which is also a characteristic of the machine. Also, whenever possible, he preferred to build in furnishings, making them a fixed part of the building. Aalto, in contrast, employs the biomorphic elements of his formal language in his furniture by bending the wood. Arguably, Aalto's approach was more modern in that he demonstrated wood could be molded instead of simply cut and fitted, while still holding its traditional qualities of texture and natural warmth. Lastly, unlike Wright, Aalto rarely built in furniture, preferring instead to have the furnishings' form express its "belonging" to the space and allowing the dweller the freedom of deciding where to place it.

Attribute 3: Aalto's human-centered modernism, in which each design is approached individually by "treating human problems with human solutions," is a characteristic of his work that is also seen in the work of Wright. Both were practical but also sought to elevate the quality of life through their architecture. In doing so, they found inspiration from earlier cultures. Wright turned to Mesoamerican forms as well as traditional Japanese building. Aalto, however, looked to the Karelian wood building practices and vernacular Finnish sources. Both believed these traditions to be authentic, and thus, more appropriate to their homelands.

Lastly, it is worth noting that both Aalto and Wright achieved an unusual level of satisfaction among their clients, who praised the work and felt privileged to live and work in the spaces they created. Both architects put the user first, whether worshiping, working, convalescing, or experiencing the joys of everyday life. They always concerned themselves with how their buildings affected people through such elements as the simple play of light or sound, the vista down a hall, or to the landscape beyond.

CONCLUSION

Summary for Attribute 1: Creation of an architecture responsive to functional and emotional needs through geometric abstraction and spatial manipulation:

1A. Spatial continuity expressed through the open plan and blurred transitions between interior and exterior spaces

1B. Dynamic forms that employ innovative structural methods and an inventive use of new materials and technologies

1C. Richness of experience created through contrast and carefully composed paths of movement

While the movements and architectural bodies of work examined above exhibit elements of formal abstraction, spatial manipulation, blurring of interior and exterior space, and structural innovation, none employ it in a way that focused on functional and emotional needs to the same elevated degree as this series by Frank Lloyd Wright. The movements earlier in the century, such as De Stijl, were notably influenced by Wright's ideas in this regard, as were Le Corbusier, Mies van der Rohe, Gropius, and Aalto who also created works with open plans. Le Corbusier moved away from cubic forms toward a more organic approach that eventually took a structurally innovative biomorphic form but with a different, more intellectual aim that contrasts with the goal in the Wright series of ease of movement and a visceral, emotional effect. Mies van der Rohe, influenced by Wright's early works, had a similar desire to create open architectural spaces, but did so with an elegant simplicity and less emotional effect. Gropius similarly pursued rationalism and austerity. Aalto moved away from functionalism to a more organic language; however, it rarely achieved Wright's level of unified expression. While all developed variations on a modern idiom and experimented with new materials, this series is distinguished by a highly consistent use of geometric abstraction for both functional and emotional effect. Wright's works alone among this cohort adhered to integral ornament, not out of a retrograde instinct but because it was essential to the creation of the rich experience that characterize them.

Summary for Attribute 2: Design inspired by nature's forms and principles:

2A. Intrinsic qualities of materials expressed.

2B. Unity of design expressed through integration of the parts to the whole.

2C. Integral relationship with nature.

In general, the architecture of the twentieth century progressively moved further away from connections to the natural world. Earlier movements and bodies of work showed greater interest in these ideas: Art Nouveau made great use of plant forms, and Gaudí's work had a natural basis and form. Even during this period, however, Wright's works were notable for the consistent reference to nature's forms and principles, but in abstracted form, and always integrated with his use of materials. Though architects of the Modern Movement employed a unity of design, this was generally expressed through rational simplicity rather than Wright's elaboration of ornament integrated with the larger design. Many architects of the twentieth century were looking to industrial sources for inspiration in materials and finishes. This further distanced their connection to nature, allowing for small insertions through terraces, gardens, and interior plantings

to suffice. While materials were important in the work of Mies van der Rohe, a reverence and connection to nature does not imbue all of his works in the way it does in this nominated series. Though Aalto had a similar interest in the use of local materials and connection to landscape, it may have been inspired by Wright's approach. Overall, however, the tendency in twentieth century architecture was to focus on functional values and a preoccupation with the machine aesthetic; this series stands apart in its fidelity to the goal of integrating concepts of space and structure into a single organism at once unified and serene.

Summary for Attribute 3: Architecture responsive to an evolving American experience:

3A. Changing modes of living are addressed.

3B. Primacy of the individual and individualized expression.

3C. Transforming inspirations from other places and cultures.

While many architects were interested in solving issues related to housing in the twentieth century, their efforts were more often directed to the collective user, not individualistic programs tailored to client wishes or needs. The resulting expressions are those of universal design rather than the eight unique structures included in this series. This period saw some architects seeking styles that were authentic to their origins: the Arts and Crafts movement early in the century was more nostalgic in its solutions, and Gaudí made use of regional influences for his highly personal and local expression. The architects of the Modern Movement, in contrast, pursued universal solutions that were intentionally not tied to specific places or cultures. Aalto's work evidenced a human-centered modernism most similar to Wright. But Wright's large body of work, distilled in this series, shows a consistent and continuing search for a more personalized alternative for American life that addressed the changing needs in the twentieth century. In doing so, Wright created solutions that fit the needs, both functional and emotional, of modern life beyond the borders of the United States.

Summary and conclusion for all attributes for criterion (ii)

A number of common themes run through the development of architecture in the first half of the twentieth century: new approaches to space; use of new materials and technology; responses to nature or to the increasingly urban environment; new modes of living and cultural expression in a world of greater global mobility. All of the architectural movements and bodies of work examined here dealt with some or all of these themes to a greater or lesser extent. What distinguishes *The 20th-Century Architecture of Frank Lloyd Wright* is the distinct and comprehensive solution offered to these problems, an architectural vision expressed in specific architectural forms that, though they evolved considerably in form and expression over a sixty-year span, were remarkably consistent. Over the course of Wright's long career, shown in this series are works that embraced, inspired, or overlapped with elements of the most important twentieth century architectural movements.

Although a number of other modern works of architecture and architectural philosophies exhibit to some degree one or more of the attributes that characterize the global interchange of ideas and influence of *The 20th-Century Architecture of Frank Lloyd Wright*, none did so in a way that incorporated Wright's organic principles in all three critical attributes, and none did so with the same effect and influence, and over such a sustained period of time.

"Few architects have given us more poetic translations of material into structure than Frank Lloyd Wright. To this young man, whose career has but begun, that the original and varied work which he has done might count as a unit for the cause of independent architecture though and original native effort. That some of this work has been the designing of simple houses of the less costly sort, does not detract from, but rather adds to the interest which it should inspire…. They embody new thought and new ideas. They have life. They express clearly and consistently certain ideals of home and of quiet, simple home life, and are solutions of problems which have been developing slowly among our people of the intellectual middle class."

Robert C, Spencer, Jr., "The Work of Frank Lloyd Wright," The Architectural Review *(1900)*

FRANK LLOYD WRIGHT PROPERTIES COMPARISONS

This chart consists of the most significant buildings by Wright in the United States as well as all of his extant works in other countries.

Buildings are those included in the nomination.

Buildings as identified as possible future extensions to the series.

Property	Year	Location	National Historic Landmark	AIA Recognition	Attribute 1	Attribute 2	Attribute 3	WH Authenticity	WH Integrity	Notes
Frank Lloyd Wright Home and Studio	1889; 1898	Oak Park, Illinois	1976	•				•	•	
James Charnley House	1891	Chicago, Illinois	1998						•	
William Winslow House	1894	River Forest, Illinois		•				•	•	
Isidore Heller House	1896	Chicago, Illinois	2004					•	•	
E.H. Pitkin House	1900	Desbarats, Ontario, Canada			•	•				Unknown authenticity and integrity.
Ward Willits House	1902	Higland Park, Illinois		•	•	•	•	•	•	Not on USA Tentative List; lacks NHL designation.
Arthur Heurtley House	1902	Oak Park, Illinois	2000					•	•	
Susan Lawrence Dana House	1902	Springfield, Illinois	1976	•				•	•	
Edwin Cheney House	1903	Oak Park, Illinois		•		•		•		
Darwin Martin House	1904	Buffalo, New York	1986	•	•	•	•			
Unity Temple	1905	Oak Park, Illinois	1970	•	•	•	•	•	•	
Ferdinand Tomek House	1905	Riverside, Illinois	1999		•			•	•	
Frederick C. Robie House	1908	Chicago, Illinois	1963	•	•	•	•	•	•	
Taliesin	1911	Spring Green, Wisconsin	1976	•	•	•	•	•	•	
Avery Coonley House/Playhouse	1912	Riverside, Illinois	1970	•	•	•	•			
Aline Barnsdall House “Hollyhock House”	1917	Los Angeles, California	2007		•	•	•	•	•	
Aisaku Hayashi House	1917	Tokyo, Japan					•			
Tazaemon Yamamura House	1918	Ashiya-shi, Japan			•	•	•	•	•	Needs research and consultation with Japan.
Jiyu Gakuen Myonichikam	1921	Tokyo, Japan				•		•	•	
Alice Millard House “La Miniatura”	1922	Pasadena, California		•	•	•	•	•	•	Not on USA Tentative List; lacks NHL designation.
S.C. Johnson Administration Building and Research Tower	1935; 1944	Racine, Wisconsin	1976	•	•	•	•	•	•	Lacks secure legal protection.

FRANK LLOYD WRIGHT PROPERTIES COMPARISONS

This chart consists of the most significant buildings by Wright in the United States as well as all of his extant works in other countries.

Buildings are those included in the nomination.

Buildings as identified as possible future extensions to the series.

Property	Year	Location	National Historic Landmark	AIA Recognition	Attribute 1	Attribute 2	Attribute 3	WH Authenticity	WH Integrity	Notes
Edgar Kaufmann House "Fallingwater"	1935	Mill Run, Pennsylvania	1976	•	•	•	•	•	•	
Paul Hanna House	1936	Stanford, California	1989	•	•	•	•	•	•	Not on USA Tentative List.
Herbert and Katherine Jacobs House	1936	Madison, Wisconsin	2003	•	•	•	•	•	•	
Herbert Johnson House "Wingspread"	1937	Wind Point, Wisconsin	1989	•	•	•		•		
Taliesin West	1938	Scottsdale, Arizona	1982	•	•	•	•	•	•	
Florida Southern College	1938	Lakeland, Florida	2012	•			•	•		
Lloyd Lewis House	1939	Libertyville, Illinois		•	•	•		•		
Goetsch-Winkler House	1939	Okemos, Michigan		•	•	•		•	•	
Herbert Jacobs House II	1944	Middleton, Wisconsin	2003		•	•	•	•	•	Not on USA Tentative List.
Unitarian Meeting House	1947	Shorewood Hills, Wisconsin	2004	•	•	•		•		
V.C. Morris Gift Shop	1948	San Francisco, California		•	•			•	•	
Price Tower	1952	Bartlesville, Oklahoma	2007	•	•	•		•	•	
Beth Sholom Synagogue	1954	Elkins Park, Pennsylvania	2007	•	•			•	•	
Harold Price Jr. House	1954	Bartlesville, Oklahoma		•				•		
Harold Price Sr. House	1954	Paradise Valley, Arizona		•		•		•	•	
Solomon R. Guggenheim Museum	1956	New York, New York	2008	•	•	•	•	•	•	
Isaac N. Hagan House "Kentuck Knob"	1956	Chalk Hill, Pennsylvania	2000		•	•		•	•	
John E. Christian House "Samara"	1956	West Lafayette, Indiana	2015		•	•				
Robert Llewellyn Wright House	1957	Bethesda, Maryland		•		•		•		
Marin County Civic Center	1957	San Rafael, California	1991		•	•	•		•	

III. Identification of Comparative Frank Lloyd Wright Properties Showing the Selection Process and Those Identified for Possible Future Property Expansion

Frank Lloyd Wright's work consisted of more than 530 built structures and more than 1100 designed works; of these, about 430 remain extant. Spanning more than seven decades, these works encompass a range of styles, materials, and structural advances, while also reflecting rapidly shifting cultural and domestic norms that would impact and be impacted by the field of architecture and design.

Of the 430 projects some are isolated landscape elements such as entry gates, a fountain, and an outdoor sculpture, while others are minor structures such as garages, stables and ancillary buildings on the site of larger projects, as well as interior designs for buildings not of Wright's design. None of these were considered for this nomination for World Heritage. Likewise, additions to Wright's buildings were not treated as projects separate from the original structures. With the elimination of these works, a committee of the Frank Lloyd Wright World Heritage Council (FLWWHC) began its selection process with a set of 321 extant works. Of this large number of works, many did not merit lengthy consideration, as they replicated features of earlier designs without major innovation. This was true for many residential commissions, which made up a large portion of Wright's work.

National Significance in the United States

To consider the most likely candidates for World Heritage, FLWWHC began by focusing on buildings in the United States that have been determined to be of national significance, or have been judged to have that potential.

In 1959, soon after Wright's death, the American Institute of Architects (AIA) developed a list of "Seventeen Remaining American Buildings Designed by Frank Lloyd Wright to be Retained as an Example of his Architectural Contribution to American Culture." The following year, the AIA board appointed a special Frank Lloyd Wright Memorial Committee to work jointly with the National Trust for Historic Preservation to identify other buildings that the initial list might have overlooked. The committee members—Alden B. Dow, Edward Durrell Stone, Karl Kamruth, and Earl H. Reed (all AIA Fellows)—expanded the 1959 list to include thirteen additional buildings, totaling thirty.

Nineteen of these buildings have now been listed as National Historic Landmarks (identified with an asterisk) by the United States Department of the Interior, and eight others not on the AIA lists have been named National Historic Landmarks as well, reflecting assessments made with the benefit of further research and the perspective allowed by the passage of time. NHL designation is based on a determination of national significance. [While others may yet be considered for this designation (a voluntary application by the owner is required), this formal designation is required prior to World Heritage List nomination by the United States.] The combined AIA lists and National Historic Landmarks (37 buildings listed below) are considered to be a complete group of the most important extant works by Wright in the United States.

- * Frank Lloyd Wright Home and Studio (Oak Park, Illinois, 1889-1898)
- * James Charnley House (Chicago, Illinois, 1892)
- ■ William Winslow House (River Forest, Illinois, 1893-1894)
- * Isidore Heller House (Chicago, Illinois, 1896-1897)
- ■ Ward Willits House (Highland Park, Illinois, 1901-1902)
- * Arthur Heurtley House (Oak Park, Illinois, 1902)
- * Susan Lawrence Dana House (Springfield, Illinois, 1902)
- ■ Edwin Cheney House (Oak Park, Illinois, 1903)
- * Darwin Martin House (Buffalo, New York, 1903-1905)
- * Unity Temple (Oak Park, Illinois, 1905-1908)
- * Ferdinand Tomek House (Riverside, Illinois, 1904-1906)
- * Frederick Robie House (Chicago, Illinois, 1908-1910)
- * Taliesin (Spring Green, Wisconsin, begun 1911)
- * Avery Coonley House and Playhouse (Riverside, Illinois, 1908-1912)
- * Aline Barnsdall House "Hollyhock House" (Los Angeles, California, 1919-1921)
- ■ Alice Millard House "La Miniatura" (Pasadena, California, 1922-1923)
- * S.C. Johnson Administration Building and Research Tower (Racine, Wisconsin, 1936-1950)
- * Edgar Kaufmann House "Fallingwater" (Mill Run, Pennsylvania, 1935-1939)
- * Paul Hanna House (Stanford, California, 1937-1962)
- * Herbert and Katherine Jacobs House (Madison, Wisconsin, 1936-1937)
- * Herbert Johnson House "Wingspread" (Wind Point, Wisconsin, 1938-1939)
- * Taliesin West (Scottsdale, Arizona, begun 1938)
- * Florida Southern College (Lakeland, Florida, 1938-1958)
- ■ Lloyd Lewis House (Libertyville, Illinois, 1939)

- Goetsch-Winkler House (Okemos, Michigan, 1939-1940)
- * Herbert Jacobs House II (Middleton, Wisconsin, 1943-1948)
- * Unitarian Meeting House (Shorewood Hills, Wisconsin, 1947-1951)
- V.C. Morris Gift Shop (San Francisco, California, 1948)
- * Price Tower (Bartlesville, Oklahoma, 1952-1956)
- * Beth Sholom Synagogue (Elkins Park, Pennsylvania, 1953-1959)
- Harold Price Jr. House (Bartlesville, Oklahoma, 1953-1954)
- Harold Price Sr. House (Paradise Valley, Arizona, 1953-1954)
- * Solomon R. Guggenheim Museum (New York, New York, 1946-1959)
- * Isaac N. Hagan House "Kentuck Knob" (Chalk Hill, Pennsylvania, 1953-1956)
- * John E. Christian House "Samara" (West Lafayette, Indiana, 1954-1956)
- Robert Llewellyn Wright House (Bethesda, Maryland, 1953-1957)
- Marin County Civic Center (San Rafael, California, 1957-1962)

Buildings Outside the United States

The small number of extant properties outside the United States were considered:

- E.H. Pitkin House (Sapper Island, Desbarats, Ontario, Canada, 1900)
- Aisaku Hayashi House (Tokyo, Japan, 1917)
- Tazaemon Yamamura House (Ashiya-shi, Hyogo, Japan, 1918)
- Jiyu Gakuen Myonichikam (Tokyo, Japan, 1921)

Factors of Selection for Inclusion in the Series

This group of 41 properties was thus considered to include the most significant for consideration from the full set of Wright's buildings. Even this limited group of buildings, however, includes numerous designs that, while they may be considered celebrated masterpieces, aesthetic triumphs, or even nationally significant, may not necessarily meet World Heritage criterion (ii) if they were not critical to an interchange of ideas in a global context.

Responding to the requirements of criterion (ii), FLWWHC identified three attributes that are the influential characteristics of Wright's work:

- An architecture responsive to functional and emotional needs, created through geometric abstraction and spatial manipulation
- Design inspired by nature's forms and principles
- Architecture responsive to an evolving American experience

FLWWHC verified the existence of such influence first by identifying the work of other architects that manifest it in two primary ways:

- Imitative interchange: in which others draw upon forms and elements of Wright's design and incorporates his work in their own; and,
- Transformative interchange: in which others move beyond imitation to draw upon Wright's fundamental principles and ideas in the creation of their own works

These interchanges were identified by examining:

- the body of scholarly and critical publications
- the exhibitions of Wright's work
- the visual evidence of the buildings' influence in the work of other noted architects or by way of written accounts of a building's effect on them

Finally, the selection committee considered the properties' integrity and authenticity, which resulted in the disqualification of several works.

Additional notes:

In evaluating the properties, the committee sought to identify works that represented clear architectural breakthroughs regarding the identified World Heritage attributes for criterion (ii). Both the **Prairie house and the Usonian House forms** are represented to some degree by a fairly large number of works. For example, the four earliest works: F.L. Wright Home and Studio, Charnley House, Winslow House and Stable, and Heller House were all heavily influenced by work of other prominent architects such as Louis Sullivan, H.H. Richardson, and Bruce Price but all show some characteristics that foreshadow the Prairie house style. Other houses contain Prairie elements but not in fully integrated designs. It was with the Willits House (1901), followed by the Robie House that Wright clearly broke away from using the work of other architects as a starting point and synthesized these characteristics into a widely influential, mature and coherent style.

The evolution of the Usonian house is also worth noting. Distilled over a long period of experimentation, the earliest Usonian houses in particular expressed Wright's fundamental ideas regarding functional organization, spatial articulation, innovative construction, material expression, connection to the setting, and affordability. The Frank Lloyd Wright Foundation lists dozens of Usonian Houses with dates ranging from 1936 to 1959. By the 1950s the popularity of the Usonian house grew, and for many wealthy clients, affordability was no lon-

ger a goal, as they sought out Wright for grander versions of what was initially intended to be a dwelling type that was simultaneously simple, beautiful and affordable. In other cases, the level of Wright's involvement is questionable as some projects were turned over to apprentices. These later works were frequently beautiful and admired by many but not influential in the way that the earliest Usonian houses established a new paradigm.

The Following Individual Building Summaries Reflect the Application of the Factors Above

For ease of identification, the eight component sites nominated are titled in BLUE. *Those properties identified as possible future extensions to the series are titled in* VIOLET. *These colors are also used on the chart on pages 246 and 247.*

FRANK LLOYD WRIGHT HOME AND STUDIO

As the centerpiece for Frank Lloyd Wright tours in Oak Park, this house is known to many visitors; and because it was a house Wright designed for himself, it may be seen as a statement of his architectural ideas at the time. However, the form of the house with its prominent gable relied heavily on Bruce Price's Chanler Cottage (1886), a shingle-style house in Tuxedo Park, New York, for inspiration. As a work of architecture, it is not considered extraordinary and holds few significant spatial, formal or technological innovations that were influential. Mostly clad in shingles, like the Chanler Cottage, it too can be considered primarily a shingle-style house, a very common form in the United States in the late 19th century. It does depart from the shingle style in its plan; it is a version of a plan type popularized by builders of the period called a "four-square," which was used as the basis for many eclectic external styles. It shares with other shingle-style houses a sense of openness that is strengthened by the wood string band on the interior that helps in unifying spaces that are otherwise separate. Although the plan was able to be expanded, this was not a new characteristic contributed by Wright. As Sigfried Giedion pointed out in *Space, Time and Architecture, the Growth of a New Tradition*, unlike the European practice, a primary feature of American domestic architecture since the first European settlers, has been that the ground plan of the American house can be easily enlarged whenever new social or economic conditions make it desirable. These changes were often significant and so deftly handled that they are almost invisible in the way partitions are removed, interior rooms opened, and rooms added on. Moreover, the function of rooms also changed. Indeed, it was not unusual for additions to surround the original structure, as Wright did at his Home and Studio in Oak Park. Thus the provision for future additions is merely a continuation of this American building tradition. More significant than the additions to his Oak Park home, was when expansion to later designs took the form of new wings. The seamless ability to expand was most successful both functionally and economically in the L-shaped ground plan, which Wright mastered in the first Jacobs house. Lastly, it is important to note, the only portion of the building ever illustrated by Wright in his publications was the studio addition. Therefore, the committee believes, and most historians concur, the Home and Studio's significance lies primarily in its role in the development of Wright's career.

Attribute 1: shows some movement towards a more open plan, but not in a significant way

Attribute 2: no significant connection to nature's forms and principles

Attribute 3: not a significant departure from existing American domestic architecture

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	Yes	Yes

JAMES CHARNLEY HOUSE

The design of this house was undertaken by Wright while working in the offices of Adler and Sullivan and has Sullivanesque formal and ornamental characteristics. Moreover, considerable scholarly debate exists as to how much of the work was Wright's alone as it is unlikely that Sullivan would have refrained from any input. The house appears to be a small palazzo comprised of a simple rectangular block following the classical prescription with a tripartite division—base, center section, and attic. Though appealing and beautifully detailed on the interior, all of the parts are interdependent, showing an early tendency to relate the parts to the whole, but its proportions, particularly the door to window ratio, are somewhat disquieting.

Attribute 1: no significant emotional, formal or spatial qualities

Attribute 2: no significant connection to nature's forms and principles

Attribute 3: not responsive to the changing American experience

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	No	Yes

WILLIAM WINSLOW HOUSE

The Winslow House is Wright's first attempt to separate and articulate the elevation as a series of layers. The ornamental plaster frieze beneath the roof shows the influence of the work of Louis Sullivan. Although it anticipates Wright's Prairie School buildings of the next decade with its low sheltering roof and deep eaves especially in the way it establishes the hearth as the focus of the domestic space, its façade is almost classical in spirit with its careful placement of parts and attention to proportion. A transitional work that was remarkable for its time, the Winslow House lacks the spatial and formal abstraction of either the Willits or the Robie houses. Nor does it have any notable connections to nature or its principles, especially in the way the parts relate to the whole. The Winslow House presents a commanding, almost majestic, face to the street in its strong expression of order, but the Prairie-esque rear of the house, while inventive, seems unrelated to the front—architecturally awkward and unresolved. It also does not hold technological or formal innovations responsive to the evolving needs of modern life.

Attribute 1: lacks significant spatial or formal abstraction

Attribute 2: no significant connection to nature's forms and principles, particularly as its parts relate to the whole design

Attribute 3: no technological or formal innovations responsive to modern life

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	Yes	Yes

ISIDORE HELLER HOUSE

Another transitional work, in the Heller House, Wright built on The Winslow House's horizontal layering, use of Roman brick, rhythmically grouped windows, decorative frieze and low hipped roof with deep eaves. Of particular note are the bands of windows and notched corners of the upper level that indicate a shift in Wright's work away from his mentor Louis Sullivan and anticipate the Prairie houses that would follow. As in later houses, one enters from the side with the living room at one end of the entry hall and the dining room at the other. The living room and dining room show a resolution of form individually; however, the way they fit into the overall plan does not create a unified whole.

Attribute 1: lacks notable spatial or formal abstraction

Attribute 2: the metaphorical connection to a horizontal landscape is not fully expressed yet

Attribute 3: a transitional work that has a few new features but is not a significant innovation

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	Yes	Yes

E.H. PITKIN HOUSE, DESBARATS, ONTARIO, CANADA

This vacation cottage on Sapper Island in Ontario was a very early work by Wright. It is designed on a four-foot grid and achieves an early synthesis of geometry, space and construction. The two-story lakeside house is surrounded on three sides by a deep terrace facing the lake on both floors. Its pitched roof has deep eaves and a second floor triangular terrace, which juts out over the terrace doors of the living space below. Of particular note is the wood flooring which runs directly from the inside to the outside. There are reports that it has been altered but little more is known as the house was not widely published and only a few photographs of it exist. It is in a remote location, and the owners are very private and do not want visitors.

Attribute 1: features spatial continuity and blurring of inside and out through use of terraces and continuity of materials

Attribute 2: the terraces provide a connection to the natural setting

Attribute 3: not a departure from contemporary domestic design

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Unknown	Unknown

WARD WILLITS HOUSE

It is in the Willits House, the earliest mature Prairie house, that Wright first achieves a three-dimensionality and ordered spatial expression of freedom and openness. It also holds a new tension between the poles of abstraction and representation. The Willits House embodies all of the Prairie house characteristics such as strong earth-hugging horizontal form, low hipped roof, deep eaves, and horizontal bands of windows. It is also important for its overlapping spatial volumes, spiral movement pattern and a cross-axial plan that reaches into and connects with the landscape. Though less refined in design and execution than the more fully developed the Robie House, with its remarkable open plan and nascent blurring of interior space, the Willits house was widely published and included in exhibitions. Its cross-axial plan was widely imitated and continues to be referenced today.

Attribute 1: significant achievement in plan

Attribute 2: strong and consistently horizontal form is characteristic of the Prairie style

Attribute 3: a new form for American domestic architecture

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

ARTHUR HEURTLEY HOUSE

The Heurtley House is notable for its muscular yet simplified form. It was designed and built in 1902 at approximately the same time, or shortly after, the Willits House. It has many features of the mature Prairie house—low hipped roof with deep eaves and a continuous band of windows beneath the eaves. Constructed of two colors of Roman brick in alternating courses, one course of brick projects slightly to reinforce its horizontality. Echoing the dramatic arch of the entry is the arched opening of the fireplace within. While it has many elements that would become part of the Prairie house aesthetic such as a greater horizontality of form, the rooms of the living spaces remain distinct. The Heurtley House also lacks the formal innovations of the Willits House's projections into the landscape and the blurring between interior and exterior space of the Robie House.

Attribute 1: does not have the open plan that is characteristic of the Prairie house

Attribute 2: has a more noticeable horizontal emphasis but not in a fully unified way

Attribute 3: not a significant departure from existing American domestic architecture in its internal spaces and functions

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	Yes	Yes

SUSAN LAWRENCE DANA HOUSE

The initial brief for the Dana House was for a remodeling of an Italianate mansion with significant additions, however, the result was a grand and highly complex house with lavish décor in the Prairie vocabulary. It lacks, however, three key elements of modernity—simplification and abstraction of form, blurring of interior and exterior spaces, and technological or formal solutions appropriate to evolving modes of living. The interior spaces are rich in form and spatial qualities but remain distinct rooms. This project marks the first time Wright chooses a plant form, the leaf of the native sumac tree, as the leitmotif, abstracting it for the house's ornamental frieze beneath the eaves, the copper-sheathed roof gable, as well as leaded glass windows, rug patterns, and lampshades. Although this provides a basis for organic unity, the elaborate decoration hearkens to Victorian tastes and lifestyles rather than modern ones.

Attribute 1: no spatial manipulation or geometric abstraction of form

Attribute 2: reference to nature's forms principles found only in the decorative theme

Attribute 3: a design firmly in the mold of earlier American domestic architecture

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	Yes	Yes

EDWIN CHENEY HOUSE

The Cheney House contains many of the major elements of the mature Prairie house with its simplified and abstracted form, squat central chimney, low hipped roof and continuous band of fully glazed doors. A high wall enclosing the front garden, and raised living space with terrace provide a high degree of privacy from the street. It is also remarkably open with only screens separating the living room space from the dining and library spaces in the front half of the house. Nevertheless, its simplified block-like form and plan lack the sense of movement achieved through spatial manipulation and seen in both the Willits and the Robie houses. The fully glazed doors opening onto to the second level terrace, and a private garden off the first level, provides a connection to the immediate setting. It does not include any major technological or social innovations. The house is difficult to see from the street or to photograph, consequently its influence was limited. Currently, it appears neglected and in poor condition.

Attribute 1: little spatial manipulation to create sense of movement

Attribute 2: terrace and private garden provide limited connection to setting

Attribute 3: lacks significant innovations reflecting twentieth-century domestic life

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	Yes	No	Yes	No

DARWIN MARTIN HOUSE

A large and very complex building with its adjacencies, the Martin House is highly regarded for its quadruple block plan, abstraction of form and integration of building elements leading towards the dissolution of architectural form into the natural world achieved through terraces, pergolas, walkways, balconies, and windows. It can also be considered a total work of art in that Wright designed not only the buildings but the garden, art glass windows, furnishings, light fixtures, and textiles, including clothing for the client. Unfortunately, the house fell into disrepair, portions of the building were demolished, and the property subdivided to construct an apartment building. Many of the decorative fixtures were also either sold or discarded. In recent years a major campaign to restore the site has resulted in the acquisition of the property on which the apartment building stood, reconstruction of the pergola, conservatory, and garage, and reproduction of much of the lost art glass windows, Wright-designed furniture, cabinetry and light fixtures. There is also a new, though sensitively designed, visitors center by Toshiko Mori directly adjacent to the house, which also affects the integrity of the setting.

Attribute 1: notable for abstraction of form and complex plan

Attribute 2: building features tie the house to its setting, and numerous features link its parts to the whole design, forming a total work of art

Attribute 3: a highly personalized house design

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	No	No

UNITY TEMPLE

One of the first truly modern buildings, it unites aesthetic intent and structure through the early use of a single material—reinforced concrete—to create an environment for a spiritual experience. This is achieved through the intentional circulation through the building, requiring the experience of light and dark, solid and void, and most important, Wright's concept of "compression and release." The intrinsic quality of the concrete is expressed frankly; its austere surface tempered by exposing the finer pebble aggregate. Derived from the traditional meeting house form, Unity Temple's radical cubical appearance was intended as a manifestation of the denomination's progressive beliefs. Its form expresses both its monolithic construction and interior functions: the sanctuary at one end, the social room at the other, with a foyer connecting the two. The sanctuary, in particular, is notable for its spatial complexity and integration of parts. The ceiling grid and other minor elements, including light fixtures and wood striping on balcony parapets, repeat in an interlocking frame of lines in space resulting in a dynamic and unified spatial composition.

Attribute 1: widely influential for abstract cubic form and early use of reinforced concrete

Attribute 2: its form expresses the nature of concrete, and many interior details emphasize the geometric forms, giving a highly unified design

Attribute 3: gives modern form to the vernacular meeting house and emphasizes the individual's experience

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

FERDINAND TOMEK HOUSE

The Tomek House in some ways anticipates the Robie House. Wright himself said that its plan was "later elaborated into the plan of the Robie House." Like Robie, it is strongly horizontal, but because its entry is prominently placed in the center of the ground level, it does not hold the emotional power of a circuitous path of entry with its experience of contrast as in Robie. It has narrow bands of windows (rather than fully glazed doors opening on to terraces as in the Robie House), a wood/stucco exterior, and Roman brick interior, and lacks a fireplace as a means of organizing the primary living space. As a result, there is little continuity between the interior and exterior, and the wood and stucco exterior is not as effective as the Roman brick in simplifying the overall form.

Attribute 1: has elements of a nascent open plan

Attribute 2: has some of the symbolic horizontal elements that recall the Midwest setting, but there is little continuity between exterior and interior

Attribute 3: not a coherent or mature expression of a new domestic form

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	No	No	Yes	Yes

FREDERICK C. ROBIE HOUSE

This house fully expresses the open floor plan concept that was seen experimentally in earlier works, and the horizontal "prairie" form to its extreme. The open plan of its main floor living space is widely credited with changing domestic design by allowing interior space to open up and flow from one room into another; while its bold horizontality, at once ground-hugging and gravity-defying, is an

abstract embodiment of the flat Midwest prairie landscape, expressed through projecting cantilevered roofs, deep eaves, continuous bands of art-glass doors, and expressive use of Roman brick. The Robie House's low-hipped roofs and deep eaves are reminiscent of those in Japanese temples. However, the eaves are also functional: in summer they protect occupants from the heat of the midday sun, while in winter when the sun is lower on the horizon, they allow passive solar gain. In summer the courtyard on the north serves as a cool-air tank, and the broad bands of art glass doors provide interior ventilation. Innovations include the integration of heating and lighting within the structural and decorative framework of the house, and the inclusion of an attached three-car garage is an early example of the incorporation of the automobile into modern residential architecture. The design employs contrast in many forms: compression and release, light and dark, and interpenetrating large and small volumes, while offering an immediate connection to the surrounding landscape through bands of art glass doors and windows, and by extended low eaves that draw the eye past the structural boundaries and toward the horizon. Widely published, it defined a new way to build for life in the twentieth century.

Attribute 1: the fully realized open plan, use of compression and release, and dramatic roof cantilever set the Robie House apart and exemplify the Prairie house

Attribute 2: multiple horizontal elements reinforce the metaphor of the flat prairie

Attribute 3: the incorporation of new technologies, as for heating, combined with the open plan to create a more informal, less restrictive domestic experience

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

TALIESIN

This house and work complex is the consummate example of a building integrated with its setting. Set amid rolling hills within a rural landscape, the structure, built on three sides of a hill uses broad glass expanses on all sides to connect not only the interior to the exterior but also to provide a continuous visual connection from the interior courtyard at the top of the hill through the house to distant hills at the periphery of the property. Man-made materials contrast with natural stone both inside and outside, which is deployed to resemble the naturally occurring stone outcroppings throughout the landscape.

Attribute 1: multiple features blur the transition between indoor and outdoor spaces

Attribute 2: the consummate example of a building with an organic connection to its natural setting

Attribute 3: Japanese and Western influences are synthesized into an innovative architectural composition

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

AVERY COONLEY HOUSE / PLAYHOUSE

The Coonley House is a large and complex property. In the original two-level plan, the lower floor was split into three separate buildings by the entrance drive passing under the second level kitchen. Although the work spreads out seemingly unrestrained on its site, the use of axiality and symmetry gives the composition with its shallow pool and garden a remarkable sense of repose. Rising to the second-floor living space is a journey of twists and turns culminating in one of Wright's most dynamic and beautiful interior spaces. Passing into the living room a sense of repose returns, with its centrally located, massive and visually heavy fireplace that is balanced by a floating and rhythmically modulated tent-like ceiling. Beneath it, a mural of a woodland scene joins with continuous casement windows on three sides of the room giving the illusion that the ceiling is floating free of support. Although notable for its connection to its setting and pavilion plan, this property's integrity has been significantly impaired by having been divided into three separately owned residential units, portions of which are in very poor condition. The separate Coonley Playhouse, now a private home, is remarkable for its brightly colored windows, but the originals have been removed from the building and replaced by reproductions.

Attribute 1: the plan and procession through spaces has dramatic power and provides an emotionally rich experience

Attribute 2: has a notable connection to its setting

Attribute 3: a striking and highly personalized house

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	No	No

ALINE BARNSDALL HOUSE "HOLLYHOCK HOUSE"

Hollyhock House unites interior and exterior spaces, as well as the surrounding landscape, through the consistent use of integral ornamentation taken from natural forms and the use of lawns, courtyards, and rooftops as part of the living space. The house is an original adaptation of the local Spanish tradition of a patio house combined with ancient Mesoamerican forms appropriate to the history of the area. It suggests a Maya temple in its siting atop Olive Hill and its canted walls and massive appearance, yet within its open courtyard, a fresh interpretation of the Spanish patio anchors the interior configuration. The stylized hollyhock, which gives the building its name, appears as integral concrete ornament on the exterior, unifying the building parts. The hollyhock theme is reinforced decoratively through interior finishes and fittings, such as furniture, light fixtures, and architectural elements. These, combined with gardens of hollyhocks surrounding the house, further enhance the overall artistic effect and unify the building, interior decoration, and landscape as Wright's first courtyard house, its design seamlessly melds exterior and interior living space. A multi-level spatial experience around the open courtyard moving in and out of dark passageways into bright open space culminates on the roof terrace–one of the first in modern architecture, which provides sweeping views of the surrounding landscape extending from the Hollywood Hills to the Pacific Ocean. This unusual and striking house was designed to meet the unique requirements of its owner as both a home and a setting for artistic events. It goes beyond those qualities, however, in the way its massive forms reference indigenous forms of the region, giving the design deeper poetic qualities.

Attribute 1: contrast and carefully composed paths of movement create a rich experience and blur boundary between inside and out

Attribute 2: naturally-based ornament in a variety of forms unites the composition

Attribute 3: interprets indigenous forms in a modern vocabulary; architecturally expresses the individuality of the client

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

AISAKU HAYASHI HOUSE, TOKYO, JAPAN

This the only structure undertaken by Wright in Japan without his personal supervision. A single-story wooden structure, it features a rough stone fireplace in an expansive living room, which opens onto a small pool at the back of the house. Changes to the building began immediately following Aisaku Hayashi's resignation as General Manager of the Imperial Hotel in 1921. It has long been unclear just how much was transformed and when, as there remains only a drawing of the original building but no photographs of it as completed. In the early 1950s, the advertising company Dentsu assumed ownership for use as a company guesthouse. However, by 2001 the only remaining original portion of the building was the living room. The pool was drained and no original furniture remains. In 2015 Dentsu closed the property completely, making it unavailable for inspection.

Attribute 1: no spatial manipulation or geometric abstraction of form is evident

Attribute 2: nature's forms and principles are not strongly in evidence

Attribute 3: a blend of traditional Japanese forms with those of the Prairie style

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	Yes	No	No

TAZAEMON YAMAMURA HOUSE, ASHIYA-SHI, JAPAN

This is an early example of the transition from the horizontality of the Prairie houses to the three-dimensionality of Hollyhock House and later works. Although it was designed in 1918, construction did not begin until 1922, after Wright's departure from Japan. The building was a collaboration with Arata Endo who also directed the construction. It is constructed primarily of reinforced concrete with an overlay of Ōya stone, and is evocative of Wright's Los Angeles houses. It is set on a steep hillside (like Fallingwater) in Ashiya, overlooking Osaka Bay in western Japan. The villa is on four levels, of one story each, and is formally and spatially complex. Of particular note is the progressive path of movement and unfolding sense of discovery. By stepping the house into the hill, the house takes advantage of the extraordinary views the site afforded. Wright's hand is evident in the main living spaces; the multi-use portion of the second level is in a more traditional Japanese style with tatami mat flooring. Though somewhat influential in Japan, it was not widely published in other countries, making its influence limited compared to Hollyhock House. This building may also be considered for a future extension of the series, but further research would be needed first, as well as consultation with the State Party of Japan.

Attribute 1: spatial and formal complexity in the composition; experientially rich through progressive path of movement

Attribute 2: the design of the house responds to its hillside setting

Attribute 3: a blend of traditional Japanese elements with those for contemporary living drawn from Wright's earlier Prairie houses

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

JIYU GAKUEN MYONICHIKAM (GIRLS' SCHOOL), TOKYO, JAPAN

This building with Prairie School elements (vertical elements contrasting with deep eaves and a shallow roof pitch) is in other respects a fairly conventional design for a school. It is notable for art glass, interior fittings and other decorative elements with Japanese characteristics that also recall the Prairie School; but its form and use of space is not particularly notable. Like the Yamamura house, it was well known in Japan, but not widely published in other countries, making its influence limited.

Attribute 1: does not exhibit notable geometric abstraction or spatial manipulation

Attribute 2: appealing décor achieves a significant unity of design in linking the parts to the whole

Attribute 3: although the decorative elements show an exchange of ideas between cultures, the overall design is not a departure for its function

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	Yes	No	Yes	Yes

ALICE MILLARD HOUSE "LA MINIATURA"

The Millard House is the first and most celebrated example of the innovative system of reinforced concrete construction (called "textile block") that Wright developed in the early 1920s as a response to modern industrial practices of standardization and prefabrication. Through the use of integral decoration inspired by ancient Meso-American motifs, the material components of the house imbue the functional character of utilitarian concrete with a beauty that few at the time considered possible. A remarkable example of the new, modern studio house type, it was designed around a two-story living room with dining room below and bedrooms on split levels to the rear. The Millard House is also an extraordinary adaptation of a small house to an architecturally challenging ravine site that creates an extraordinary relationship of architecture to nature. The house displays a relationship between clearly defined geometric form and an overall decorative surface that establishes a profound resonance with the climatological and cultural traditions of the region.

Attribute 1: the dynamic forms of the house capitalize on an unusual location to provide a striking experience

Attribute 2: textile block expresses intrinsic nature of concrete; house has a dramatic connection to its ravine setting

Attribute 3: a unique design that makes use of Meso-American motifs

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

S.C. JOHNSON ADMINISTRATION BUILDING AND RESEARCH TOWER

An influential example of Wright's exploration of created environments through dynamically changing perceptions of space and light. It is a structurally adventurous inspiration drawn from nature's forms. The Administration Building is an early and highly successful creation of an open plan-type office space arrangement. It is a dramatic and dynamic space, with its forest of reinforced concrete "lily-pad" columns and a naturally illuminated ceiling. The use of reinforced concrete for the highly unusual columns was a notable innovation, as were the horizontal bands of Pyrex glass tubing (later replaced by molded Plexiglas) to articulate the space. The building is a complete work of art; with every chair, desk, and other pieces of furniture and interior design elements designed by the architect. The building also shows an early incorporation of the automobile in the design of covered parking that acts as, and provides direct access to, the main entrance to the building. The later addition by Wright of the Research Tower, in the same materials as the original structure, with its cantilevered floors, gives a vertical accent to the horizontal composition and a powerful point of focus to the whole in its urban setting. The two buildings create an integrated arrangement of administrative and research space combined with recreational and social facilities for employees.

Attribute 1: innovative use of reinforced concrete for column (and cantilevered floors in the tower) allows an open plan and unusual office experience

Attribute 2: a fully unified design, with all functional and decorative elements contributing to the experience of the space

Attribute 3: incorporates automobile use in the design at an early date; the experience of the workers in the space is paramount

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

EDGAR KAUFMANN HOUSE "FALLINGWATER"

Here Wright synthesized interior spaces, with massive cantilevered terraces stretching design and technology to its limits. In Fallingwater, Wright embraced elements of the International Style, including the elimination of ornamentation, but bound the design of the building to the site through the use of native stone laid to suggest the way it appears in nature, and with terraces suggestive of the ledge of the waterfall over which the house was built. Truly linking building and site together as one, Fallingwater's expression of the international aesthetic took the form in a new direction. It is unique among Wright's works.

Attribute 1: ambitious use of reinforced concrete for cantilevers; spatial continuity provided through continuity of materials inside and out

Attribute 2: limited palette of materials and colors derived from natural features creates extraordinarily unified design

Attribute 3: a unique house tailored to its owner; American response to International Modernism

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

PAUL HANNA HOUSE

A more elaborate approach to applying Usonian principles to the organization of space, the Hanna House escapes from previous constraints of rectilinear geometry to more fully synthesize the connection between interior and exterior with a hexagonal plan. Local redwood in reverse board and batten and San Jose brick is used on both the interior and exterior. The innovative hexagonal plan is based on the cells of a honey bee hive, which fits into almost any available space and is easily expanded in any direction. The six-sided modular plan also provides an extraordinary sense of openness while gracefully integrating the house with it sloping site and enabling expansion as the family grew and circumstance permitted. The form was also adapted to the furnishings. Hanna House was widely published and studied but not directly imitated because of its geometric complexity.

Attribute 1: the complex plan makes possible a striking openness and a rich experience

Attribute 2: an exceptionally unified design based on the hexagon and the use of materials on exterior and interior

Attribute 3: an unusual and highly individualized design that facilitated expansion

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

HERBERT AND KATHERINE JACOBS HOUSE

This is the first "Usonian" house, a distinctively different approach to the connection of site and building. The building is oriented to a private garden behind the house, in contravention of norms in which suburban homes "face" the street. This enabled elimination of the barrier between interior and exterior in a small house, while maintaining the privacy of the family inhabiting the house. The living spaces are opened entirely onto the garden, with integral decorative elements combining with structure to create the perception of larger spaces. In response to needs of a homemaker without servants, its kitchen opens onto the living spaces. As a prototype of numerous "Usonian" houses, the Jacobs House perfectly illustrates how inexpensive construction methods and materials combined with a novel and organic approach to space could create architecturally elevated shelter for an emerging middle class. Its L-shaped plan was widely copied.

Attribute 1: dynamic spatial continuity achieved through modest materials on a small scale

Attribute 2: takes maximum advantage of a small site to engage house with its garden; materials expressed with honesty

Attribute 3: the prototype for an artistic but affordable single-family home of the mid-twentieth century

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

HERBERT JOHNSON HOUSE "WINGSPREAD"

Wingspread is a grand, almost monumental, house in the Usonian mold. Its interesting form and dynamic open plan, incorporates a tall cylindrical fireplace under a dome-like ceiling next to a spiral staircase, leading up to a belvedere.

Though it incorporates many features of other significant buildings by Wright, including built-in furniture, it lacks the same creative innovation. Moreover, the sheer scale of the space precludes the rich experiential qualities of intimacy and connection to the natural world seen in works with greater physical and budgetary constraints. The house is now used as a conference location and museum, with substantial modifications to accommodate these uses.

Attribute 1: open plan creates spatial continuity, but experience of space is not as rich or striking

Attribute 2: unity of design and intrinsic qualities of materials expressed

Attribute 3: the large scale and cost of the design negate some of the original Usonian goals

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Yes	No

TALIESIN WEST

The buildings in this complex are constructed from the desert rubble stone and sand taken from the nearby arroyos, creating a primitive quality in the masonry, which was then deployed in refined and unusual geometries which the viewer experiences as a processional through its spaces. Its primordial qualities and abstract form with references to indigenous cultures tie it deeply to its desert setting, resulting in a work that is unique in Wright's oeuvre but attracted wide attention.

Attribute 1: power of place revealed through processional; rooms open out on and extend into desert

Attribute 2: innovative desert masonry expresses texture, color and materiality of desert environs

Attribute 3: indigenous American influences are a continuous theme

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

FLORIDA SOUTHERN COLLEGE

This campus design is particularly noteworthy for its original plan which called for a collection of independent buildings standing in a dense grove of orange trees, connected by a series of arcades extending from the hill to the lake below. The height of arcade was scaled to that of the trees and grid of the orchard related to the path of the arcades. The buildings were to peek out above the canopy. This would have provided students with a daily promenade from the water, through the trees, to the campus buildings. The connection to the water was not executed, and the orange grove was removed, leaving a disjointed sense to the whole arrangement. One building on the campus, the Annie Pfeiffer Chapel, is particularly notable for its abstract form. The complex is unfortunately in poor condition, and the expansion of the campus with the addition of buildings by other architects has contributed to a significant loss of integrity. Because Wright was disappointed with the changes made to the plan, its publication was not encouraged thus it was not widely studied.

Attribute 1: the circulation through the campus does not create a coherent procession

Attribute 2: the planned connections to the landscape and setting were not completed

Attribute 3: an unusual design for an academic use

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	Yes	Yes	No

LLOYD LEWIS HOUSE

The Lloyd Lewis House exemplifies the linear Usonian plan. Most significant is its siting along the edge of a ridge overlooking a river, views of which Wright manipulates in the exterior path and interior circulation. All of the primary living spaces are raised. The secondary rooms are on the ground floor beneath as is the entry with stairs rising to the first floor living space providing an entry experience of contrast and discovery similar to the Robie House, though the house is not noted for any significant innovations. The house is currently in poor condition from deferred maintenance and problems with the foundation.

Attribute 1: richness of experience created through contrast of spaces

Attribute 2: connection to the natural setting emphasized through views from house

Attribute 3: not a significant addition to Usonian ideas

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Yes	No

GOETSCH-WINKLER HOUSE

This house also adapts the Usonian approach to a linear plan that is a sophisticated series of points and counterpoints, beginning with a basic rectangle from which the other spaces unfold. The living space is particularly complex spatially, in the way the views are presented and light enters from multiple sides. The house has all of the Usonian characteristics, affordable construction, the use the same materials inside and out, dynamic space, and connection to setting. Although an interesting adaptation, it does not significantly add to the Usonian concept anything not realized earlier in house for the Herbert and Katherine Jacobs House.

Attribute 1: complex use of space creates richness of experience

Attribute 2: connection to the natural setting emphasized through use of light and views

Attribute 3: not a significant addition to Usonian ideas

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Yes	Yes

HERBERT JACOBS HOUSE II

This is a brilliant Usonian House that was widely regarded as a model home for ecological design at the time it was built. It was particularly prescient in its use of sustainable building precepts such as the use of local materials and passive heating/cooling. The experience of entering the house is one of contrast: one must pass through what appears to be a tunnel in a mound of earth at the rear of the house, only to come out on a broad flat and open site with the house seeming to grow out of the earthen mound now behind the viewer. Inside, its open plan extends the length of the first floor and through fully glazed doors out to terrace and pool in an overall unified plan. The passive heating and cooling is achieved through its innovative elliptical form, deep eaves, and southerly orientation. In winter it is designed to take advantage of the sun by warming the concrete pad as it moves low along the horizon. When in summer the sun is higher on the horizon, the interior of the house is shielded from its heat by its deep overhanging roof. The earth-bermed northern wall provides insulating qualities in winter and its constant temperature helps to cool the interior in summer. The Jacobs II approach to passive heating and cooling was widely imitated and the house continues to be studied in architectural curricula around the world.

Attribute 1: its dynamic forms employed highly innovative construction and use of sustainable technology

Attribute 2: a very strong connection to the natural setting through functional features also creates a highly unified design

Attribute 3: a model for energy efficiency for a house in the twentieth century

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

UNITARIAN MEETING HOUSE

This church constructed of local stone is notable for its soaring prow-like copper roof framing a double-height triangular window with horizontal wood mullions. This massive prismatic window is the source of all natural light in the sanctuary. The original plan was composed of two equilateral triangles set back-to-back. The sanctuary occupies the front triangle, the rear one with its low ceiling, is given over to the entry lobby, classrooms, kitchen and informal meeting space with a fireplace. The roofline was influential in mid-century church design in the United States; however, in other respects, the building was not innovative, and its integrity is impaired by several substantial later additions which dwarf the original building.

Attribute 1: dynamic roofline is a notable feature

Attribute 2: large window emphasizes connection to the outside

Attribute 3: despite striking form, in interior space and function it differed little from other contemporary churches

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Yes	No

V.C. MORRIS GIFT SHOP

This is a small building, only the façade of which is visible from the street. It has a plain brick façade and oversized arched doorway that harkens back to earlier projects such as the Heurtley House. The building is primarily interesting for its interior, which features a ramp that anticipates that of the Guggenheim Museum but its dramatic potential is not as fully realized. It lacks other significant or noteworthy features.

Attribute 1: the interior ramp creates a procession through the space

Attribute 2: though parts relate to the whole, the small composition does not emphatically express it

Attribute 3: not an unusual form for a commercial design

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	No	No	Yes	Yes

PRICE TOWER

As in the S.C. Johnson Research Tower, Wright abandoned the curtain wall by allowing the low wall, which on alternate floors is clad in embossed copper, to rest on the floor slab and the glass, in turn, to rest on the wall. This work was based on an earlier unbuilt design for New York City and is somewhat out of place in the small community of Bartlesville, Oklahoma. Although outstanding for its geometric abstraction based on a repeated triangular form, and an innovative structural approach of floors cantilevered from a central core applied to the problem of the tall building, it had limited influence either within the United States or outside it.

Attribute 1: innovative structure that allows intriguing exterior on a tall building

Attribute 2: building is based on a repeated triangular geometry that integrates the parts to the whole

Attribute 3: although an unusual solution to the tall building, it had little influence

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Yes	Yes

BETH SHOLOM SYNAGOGUE

This is a singular work with a dramatic overall pyramidal form. The building is anchored to the ground by a series of complexly folded concrete walls that incorporate the foundation buttresses for the three girders that support the steeply inclined woven walls of metal, glass and plastic. The building has been interpreted as both a tent and a "traveling Mt. Sinai." During the day light filters in much as it does in a tent and at night it can be compared to a mountain of light. Both the structural and decorative elements were designed as interpretations of the Jewish ceremony: the three steel tripod beams, the seven projecting lanterns, and the multi-colored winged lamp that hangs in the center. Experientially, the space lacks the nuance of some of Wright's other significant works. Though extremely interesting, it did not exert a notable influence.

Attribute 1: the structure that makes possible the dramatic pyramidal form is novel

Attribute 2: extensive use of glass but without a particular reference to its intrinsic qualities or natural forms

Attribute 3: not innovative as a worship space

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	No	No	Yes	Yes

HAROLD PRICE JR. HOUSE

This large house for a wealthy client has an L-shaped plan but in other ways appears to be a blend of Usonian and Prairie elements with its low-hipped roof, deep eaves and raised terrace. Its use of brick on both the interior and exterior offers a continuity of expression but the house lacks an overall formal unity. It received little publicity or critical acclaim, and has had several significant additions that have affected its integrity.

Attribute 1: lacks fully expressed open plan or clear progression through spaces

Attribute 2: use of exposed brick on interior, but lacks notable unity of design. Some spaces open to outside areas but not in a particularly striking way

Attribute 3: a fairly conventional house for a wealthy client

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	No	No	Yes	No

HAROLD PRICE SR. HOUSE

This large Usonian House designed for the client who commissioned Price Tower features a two-story covered outdoor atrium in the center of which is a fountain. The edges of the roof are trimmed with a stamped and punched copper fascia, which casts an interesting dappled shadow pattern on the concrete block walls. On the interior, the ceilings are layered and seem to float over the concrete block walls, connected only by thin steel supports. While beautiful, it adds nothing spatially new or particularly innovative. And like the earlier house for Price Jr., its large size and expensive construction does not make it a good example of the Usonian concept.

Attribute 1: no notable manipulation of space

Attribute 2: interesting use of materials (exposed concrete block) to make use of properties of concrete in block form

Attribute 3: a large house in the Usonian vocabulary, but not an elaboration of Usonian ideas

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	Yes	No	Yes	Yes

SOLOMON R. GUGGENHEIM MUSEUM

This building, unique to Wright's oeuvre, created a new prototype for the modern art museum – an experience of the building itself. It incorporates several important attributes, including the use of concrete's plasticity to express the interior spiral ramp, and the use of the circle motif repeated in both the ramp and the overall form. These qualities have made it a world-famous building, not imitated directly, but one that created a new paradigm.

Attribute 1: architecture creates extraordinary emotional response and a new museum experience; interior cantilevered spiral ramps expressed in exterior form

Attribute 2: circle motif repeatedly expressed, as is the inherent plasticity of concrete

Attribute 3: prototype of an art museum where the building itself is an art object

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	Yes	Yes

ISAAC N. HAGAN HOUSE "KENTUCK KNOB"

This is another "grand" Usonian house that was unconstrained by cost. It makes use of a hexagonal plan, has a low hipped, raised-seam, copper roof, and is beautifully fitted into its hillside setting, though the most expansive views are not visible from inside the house. Particularly interesting is the hexagonal kitchen, which, in an unusual move for Wright, is prominently located. Its wraparound counters and entrances on two sides are well suited to the client who enjoyed cooking. There is nothing innovative formally or spatially in the design and it does not offer anything new to the Usonian idea. As its original owners did not often allow it to be photographed, it was not widely known.

Attribute 1: open plan used in main spaces, but does not advance the Usonian concept

Attribute 2: its hillside location makes a connection to the natural setting, but it is experienced only indirectly; use of hexagons for plan contributes to unity of design

Attribute 3: not a significant addition to Usonian ideas

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	Yes	Yes

JOHN E. CHRISTIAN HOUSE "SAMARA"

This example of a mature Usonian house was designed for a university professor and his family with much input from the clients during its design phase. Completed during one of Wright's busiest periods of his career, he relied on apprentices to supervise the project and agreed to the client's wishes that the house be completed over time as funds became available. The Christians kept true to Wright's design and continued working with Wright's former apprentices and Taliesin Associated Architects, his legacy firm, to complete the original design concepts of the house. An interior redecoration in the 1970s and supplemental decorative features and furnishings were added in the four decades following Wright's death.

Attribute 1: Samara is single-story house with a large open living room. A series of fully glazed doors protected by deep overhangs open out to the terrace connecting interior to exterior space.

Attribute 2: It is constructed of brick, though it also uses naturally finished mahogany, with embossed copper fascia. The samara or "winged seed" motif is employed in the clerestory wood cutouts, which appear to open and close as one passes. The atypical exuberant interior color palette was influenced by Olgivanna Lloyd Wright.

Attribute 3: Wright addressed a central feature mid-century life, the television, with a mechanically operated retractable cabinet that is concealed in the floor when not in use as well as custom television dining trays. Nevertheless, it is not a significant addition to Usonian ideas.

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	No	No	No

ROBERT LLEWELLYN WRIGHT HOUSE

This two-story Usonian House has some interesting features, including an almond-shaped plan and concrete block construction. The concrete block is used inside and out. Other aspects of the design, especially the circulation, are not fully resolved. The house appears in poor condition and its site overgrown.

Attribute 1: use of space and paths of movement through it are not particularly evident

Attribute 2: use of exposed concrete block expresses the nature of concrete

Attribute 3: not a significant addition to Usonian ideas

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
No	Yes	No	Yes	No

MARIN COUNTY CIVIC CENTER

Although outstanding for its novel and symbolic form for a postwar public building, this building had limited influence either within the United States or outside it. A substantial portion of the building was completed after Wright's death, therefore its authenticity is somewhat compromised. In form it has two major wings linked by a circular "elbow;" each wing is an open atrium with skylights running its length. The building spans between two hills, engaging directly with the striking natural setting. Here Wright developed a novel form for a civic building, incorporating automobile use. In this way it was highly responsive to the postwar American society.

Attribute 1: dynamic forms

Attribute 2: has an integral relationship with its setting

Attribute 3: a novel form for a civic building that incorporated automobile use

Attribute 1	Attribute 2	Attribute 3	Authenticity	Integrity
Yes	Yes	Yes	No	Yes

Conclusion

The foregoing analysis of influence, which also includes the requirements of integrity and authenticity, limits the revised series being nominated for 2019 consideration to eight structures that were among those in the nomination submitted in 2015. They are:

- Unity Temple (Oak Park, Illinois, 1904)
- Frederick C. Robie House (Chicago, Illinois, 1906)
- Taliesin, Spring Green (Wisconsin, begun 1911)
- Aline Barnsdall House / Hollyhock House (Los Angeles, California, 1917)
- Edgar Kaufmann House / Fallingwater (Mill Run, Pennsylvania, 1935)
- Herbert and Katherine Jacobs House I (Madison, Wisconsin, 1936)
- Taliesin West (Scottsdale, Arizona, begun 1937)
- Solomon R. Guggenheim Museum (New York, New York, 1943)

Structures that may be considered for a future extension to the nomination are:

- Ward Willits House (Highland Park, Illinois, 1902)
- Tazaemon Yamamura House (Ashiya-shi, Japan, 1918)
- Alice Millard House / La Miniatura (Pasadena, California, 1923)
- S.C. Johnson Administration and Building and Research Tower (Racine, Wisconsin, 1935; 1944)
- Paul Hanna House /Honeycomb House (Stanford, California, 1936)
- Herbert and Katherine Jacobs House II (Madison, Wisconsin, 1946)

Considerations Affecting the Nomination of Future Extensions

The reduced series of eight properties is presented here as fully able to demonstrate Outstanding Universal Value in its own right, as it includes a full expression of each of the identified attributes and sub-attributes for criterion (ii).

One additional property, the S.C. Johnson Administration Building and Research Tower, was identified in the original nomination as deserving inclusion in the series at a future date. Four additional properties in the United States have now been identified as potential extensions to the series in response to ICOMOS's opinion that additional examples of Wright's domestic architecture should be included.

It was agreed with ICOMOS when consultation began following the World Heritage Committee's 2016 referral decision that it would not be possible to add properties not yet on the United States Tentative List as part of these revisions. The United States process for adding properties to the Tentative List is a lengthy one that requires consultation with property owners and obtaining public comment, among other steps.

There are three reasons why these five properties in the United States cannot be included in the series at this time:

- Only one of the properties (S.C. Johnson Administration Building and Research Tower) is on the United States World Heritage Tentative List; the others are not.
- It is a requirement of United States law that properties must have official recognition of national significance (i.e. designation as a National Historic Landmark) to be nominated to the World Heritage List. Two of the properties proposed as extensions are not yet National Historic Landmarks (the Willits House and the Millard House). This designation can be made only upon a voluntary application by the property owner; therefore no time frame can be established.
- At least one of the properties lacks secure legal protection at this time (S.C. Johnson Administration Building and Research Tower). In the United States, such protection for private properties (as explained in Section 5.c.) is provided through local law or, where that is not sufficient, a legal property restriction entered into voluntarily by the property owner. The resolution of these issues is not under the control of the State Party.

Nominations to the World Heritage List by the United States of America are made at the discretion of the United States Secretary of the Interior. For this reason, the Department of the Interior has never established or maintained an intended sequence or timing for future nominations.

These five latter buildings must therefore obtain either National Historic Landmark designation or enhanced legal protection or both, and be added to the United States Tentative List before such an extension can be put forward.

Finally, for the property in Japan that has been identified, further research as well as consultation with the State Party of Japan would be needed before proceeding further.

3.3 Statement of Outstanding Universal Value

Brief Synthesis

The 20th-Century Architecture of Frank Lloyd Wright is a series of eight buildings that illustrate a full range of ways in which Wright's unique approach to architectural design fused form with spirit to influence the course of architecture in both North America and beyond. The components, located in six states across the continental United States of America, were designed and built over a period spanning the first half of the twentieth century. Each has strong individual characteristics, presenting a specific aspect or facet of a new architectural solution to the needs of Americans for housing, worship, work, and leisure. The buildings employ geometric abstraction and spatial manipulation as a response to functional and emotional needs and are based literally or figuratively on nature's forms and principles. In adapting inspirations from global cultures, they break free of traditional forms and facilitate modern life. Wright's solutions would go on to influence architecture and design throughout the world, and continue to do so to this day.

The components of the series include houses both grand and modest (including the consummate example of a "Prairie" house and the prototype "Usonian" house); a place of worship; a museum; and complexes of the architect's own homes with studio and education facilities. These buildings are located variously in city, suburb, forest, and desert. The substantial range of function, scale, and setting in the series underscores both the consistency and the wide applicability of these principles, which are often called "organic architecture." Each has been specifically recognized for its individual influence, which also contributes uniquely to the elaboration of this original architectural language.

The series showcases innovations such as: the open plan; the blurring of the boundary between interior and exterior; new uses of materials such as steel and concrete, as in cantilevered construction; new technologies such as radiant heating; the embrace of the automobile; and explicit responses to natural settings. Such features, however, are subordinated to designs that integrate form, materials, technology, furnishings, and setting into a unified whole. Each building is uniquely fitted to the needs of its owner and its function and, though designed by the same architect, each has a very different character and appearance, reflecting a deep respect and appreciation for the individual and the particular. Together, *The 20th-Century Architecture of Frank Lloyd Wright* illustrates the full range of this architectural language, which is a singular contribution to global architecture in spatial, formal, material, and technological terms.

Justification for Criterion

Criterion (ii)

To exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning, or landscape design.

The 20th-Century Architecture of Frank Lloyd Wright demonstrates an important interchange in the discourse that changed architecture on a global scale during the first half of the twentieth century. The eight components illustrate different aspects of a new approach to architecture consciously developed for an American context. Reacting against prevailing styles in the United States that were based on historic European models, this approach took advantage of new materials and technologies, but was also inspired by principles of the natural world and was nurtured by other cultures and eras, particularly Japanese design traditions. Common features of this architecture were geometric abstraction and spatial manipulation to respond to functional and emotional needs; a connection to nature's forms and principles; and aspects reflecting the value Wright placed on the primacy of the individual as fundamental to American society, including new habits of life in the twentieth century.

These innovative ideas and the resulting unified architectural works were noted in European architectural and critical circles early in the century. Assemblies, lectures and publications by Dutch and German architects and Russian constructivists acclaimed Wright's American works, with architects J.J.P. Oud, Walter Gropius, Ludwig Mies van der Rohe, and later Alvar Aalto, Jørn Utzon and Carlo Scarpa among those praising his contributions. Beyond Europe, Max Cento and Juan O'Gorman in Latin America, Walter Burley Griffin and Marion Mahony Griffin in Australia, and Raku Endo in Japan each claimed Wright as an influence during their careers.

Frank Lloyd Wright sought to establish new forms appropriate to the history, character, habits and geography of the United States. The resulting buildings, however, were in fact suited to modern life in many countries, and in their fusion of spirit and form they evoked emotional responses that were universal in their appeal. While other architects incorporated many of the characteristics of this series such as the open plan, horizontality of form, ribbon windows, and blurring of interior

and exterior space, Wright's buildings demonstrated an original architectural synthesis recognized by both critics and architects, offering a distinct and more personalized alternative to the austere, machine-inspired, rationalism characteristic of the Modern Movement. In doing so, some of the buildings in this series also offered new functional models that unerringly fit the character of modern life. Together, the series shows a comprehensive approach to architectural problems rather than showcasing individual buildings, however iconic. The legacy of this approach endures as a separate current of thought within modern architecture.

Integrity

This series of buildings contains all the elements necessary to understand and express the Outstanding Universal Value of the property, as it contains the works generally understood by critics and other architects to have been most influential, and the best examples of the noted residential forms of Prairie houses and Usonian houses. Each component highlights a different aspect of the attributes that demonstrate this influence: Unity Temple for its dynamic cubic form and early use of reinforced concrete; the Frederick C. Robie House as the quintessential Prairie house, with its innovative open plan; Taliesin as the consummate example of organic connection to the landscape; Hollyhock House as a model for the interpretation of indigenous forms; Fallingwater as the complete example of a design that fully unifies the parts and the whole; the Herbert and Katherine Jacobs House as the prototype of the Usonian house; Taliesin West as the highest example of a choreographed procession through space that gives a rich experience of its setting; and the Solomon R. Guggenheim Museum as the prototype of an art museum where the building itself is an art object. Each component work is of adequate size to include critical elements of its setting and none suffers from adverse effects of development or neglect. Each building has benefited from careful and comprehensive conservation studies and expert technical advice to ensure a high level of preservation. Buffer zones protect the adjacent settings of each building.

Authenticity

The structures in this series and their settings have remained remarkably unchanged since their construction in their form and design, use and function, materials and substance, and spirit and feeling. Conservation of each of the buildings, when needed to correct long-term structural issues or repair deterioration, has been in accordance with the highest standards of professional practice, ensuring the long-term conservation of original fabric wherever possible, and the significant features of each site. In all cases work has been based on exceptionally complete documentation. Very few features have been modified. In cases where the original function has changed, the current use is fully consistent with the original design.

Protection and Management Requirements

One of the components of this series is owned by a local government; the others are in private ownership, including by non-profit organizations, foundations and an individual. Each building is protected from alteration, demolitions, and other inappropriate changes through deed restrictions, local preservation ordinances and zoning laws, private conservation easements, and state law. Each property has been designated by the United States Department of the Interior as an individual National Historic Landmark, which gives it, under federal law, the highest level of consideration in the context of any actions by the Federal Government. Each site has an effective management system that makes use of a suite of planning and conservation guidance to ensure protection of the attributes that convey the series' Outstanding Universal Value, and the Frank Lloyd Wright World Heritage Council, formally established in 2012, meets regularly to support the professional management of the series.

"Wherever architects strive to build with true organic vision; wherever they attack a problem of building design, not as a style matter, not to produce modernism or eclecticism, but to produce integrated and beautiful buildings; wherever they delight in the qualities of materials and base their design on them both structurally and aesthetically—there the spirit of Wright is at work."

Talbot Hamlin, Architecture through the Ages *(1940)*

SECTION 4

STATE OF CONSERVATION AND FACTORS AFFECTING THE PROPERTY

4: STATE OF CONSERVATION AND FACTORS AFFECTING THE PROPERTY

4.a Present State of Conservation

THIS SERIES OF SITES, taken as a whole property, is in a very good state of conservation, as are the individual structures within the series. All of the essential structural and mechanical building systems are functional and stable. Some of the buildings are now over one hundred years old. Some of the innovative uses of materials, and building systems pioneered by Wright have needed adjustment over the years. In addition, some of the novel building materials contain inherent vice of a chemical nature, leaving them unstable in the long term. Some individual sites within the series have had more significant structural repairs than others, but all preservation and conservation work on the properties within this series, no matter the scope, has been accomplished with careful attention to retaining historic appearance, forms, and, where possible, building fabric. Information regarding preservation history of the sites is in Section 2.b, History and Development of the Property.

UNITY TEMPLE

Unity Temple is now in an excellent state of preservation, following a comprehensive repair and restoration project undertaken between April 2015 and June 2017 and based on the *Master Restoration Plan for Unity Temple* (2010), with supporting studies that included: "Condition Analysis of the Art Glass Windows at Unity Temple" by Welton/O'Neill; "Building Moisture Study" by Watson and Henry; "Plaster and Paint Study" by Building Conservation Associates.

Unity Temple has suffered from water drainage and infiltration problems over the years, related to drainage systems that were difficult to access. Major repair projects in recent years are described in Section 2.b, History and Development of the Property.

The recent comprehensive restoration by Harboe Architects addressed all aspects of building restoration and upgrades needed to safeguard the immediate and long-term viability and sustainability of the building's exterior and interior, decorative, and environmental components. Exterior work included the restoration and repair of all exterior shotcrete, which included the documentation, removal and salvage of all interior wood trim and plaster at the ceilings below the roof slabs. Work also included replacement of the Unity House skylight and restoration to its original configuration, a new skylight installed over the existing deglazed skylight framing over the Temple, and replacement of all roofing and roof drain systems. All art glass windows and their associated steel frames were removed, restored and reinstalled. The existing wood entry doors at the foyer were restored, and non-original wood windows at the South end of Unity House were removed and reinstalled. The two non-original exterior doors and frames at Unity House were replaced with replica wood doors and frames. Interior work included the replication of original plaster and paint finishes, restoration and reinstallation of all wood trim, stripping and cleaning of all concrete and magnesite floors, and restoration of all wood doors and hardware. The art glass associated with interior light fixtures were removed, restored and reinstalled. The project scope also included the installation of nine new geothermal wells in the north lawn for new ground source heating and cooling system, as well as upgraded electrical and fire alarm systems. Accessibility accommodations were enhanced for the main level of the sanctuary and the replacement of the existing exterior accessibility ramp.

Unity Temple, samples of plaster glazes based on historic colors obtained through testing, and used to determine color palette for the plaster finishes of both Unity Temple and Unity House.
Photograph by Gunny Harboe, courtesy of Harboe Architects.

Unity Temple, sample of desired exterior concrete finish compared to existing conditions.
Photograph by Gunny Harboe, courtesy of Harboe Architects.

Unity Temple, removal of degraded exterior concrete finish during restoration of building's exterior to historic appearance.
Photograph by Gunny Harboe, courtesy of Harboe Architects.

Unity Temple, view of Unity Temple wing and draping of work area during restoration efforts.
Photograph by Gunny Harboe, courtesy of Harboe Architects.

Unity Temple, application of concrete finish to exterior walls where it had been removed due to degradation.
Photograph by Gunny Harboe, courtesy of Harboe Architects.

FREDERICK C. ROBIE HOUSE

The Frederick C. Robie House has recently undergone an extensive restoration to return the building to good condition. By the 1990s the state of the Robie House was less than ideal after many years of neglected maintenance and less than thoughtful use as office spaces. The main goals of the restoration effort were to stabilize the building, repair the wear and tear caused to the historic fabric and finishes over time, and return the building to its original appearance in 1910, the year construction was completed.

Prior to beginning, a master plan was developed based on extensive research and an analysis of existing conditions of all building materials, components and systems. The work on the property was carried out in several phases beginning with exterior work in 2002. In this phase, the roof was stabilized and repaired and the brickwork and stone were repaired and repointed. Interior structural work included the treatment of all wood-framing members for termite damage. The automobile court walls were rebuilt to their original 2m height replicating this significant feature of the original house.

Major interior work saw the repair, upgrading or replacement of the mechanical systems. New systems were added for security. Interior rooms were returned to their original layout with the removal of several non-historic partitions. The building envelope preservation was completed with the conservation and repair of the art glass windows. In addition, all internal electrical wiring was updated and new water service was introduced. A climate management system, interlocking aspirating fire detection system, and a dry-pipe sprinkler system were installed.

Between 2007 and 2009, a second phase of primarily interior preservation work was undertaken. The servants' wing was restored, conserving plaster, wood floors, wood trim, light fixtures and returning to an original color palette. Conservation of plaster and woodwork on the third floor of the house was also undertaken at that time. In the courtyard, a reconstructed set of iron gates was installed.

From 2015-17 the Trust commissioned a series of analytic studies of Robie House to reconfirm its structural stability, to evaluate the fitness of its mechanical systems and climate controls, and to research original interior plaster, color and wood treatments. During this time, the Trust initiated discussion with the Smart Museum of Art, University of Chicago, to return five leaded glass windows and surviving original furniture to the house on completion of the interior restoration.

Robie House, recreation of missing inglenook bench, 2018
Photograph courtesy of the Frank Lloyd Wright Trust.

In December 2017 the Trust commenced work on the interior restoration of Robie House. Work includes carefully researched refurbishment of plaster and finishes on walls and ceilings, woodwork and floor treatments, light fixtures and selected leaded glass windows and doors. Rooms being treated include the main entry hall and stairway, billiard room, children's playroom on the ground floor, and the living room, dining room and guest bedroom on the main floor. Completion is anticipated in April-May 2019. Videos documenting work in progress are featured on the Trust's website www.flwright.org.

Installation of salvaged bricks on the south façade of the Frederick C. Robie House, November 2002. The replacement bricks were used in areas where missing and or severely damaged bricks were found, in this case on a pier on south façade of building.
Photograph courtesy of the Frank Lloyd Wright Trust.

Robie House, restoration of guest bedroom plaster, 2018
Photograph courtesy of the Frank Lloyd Wright Trust.

Installation of reproduction clay tile shingles on the stabilized east roof structure of the Frederick C. Robie House, November 2002. The reproduction tiles match the original material, configuration and installation methods used during the construction of the house.
Photograph courtesy of the Frank Lloyd Wright Trust.

TALIESIN

All of the buildings and landscape features proposed for inscription are, overall, in a good state of preservation with all of the major building systems and components in good condition. During the past ten years, a systematic program to address cyclic maintenance has been put in place to ensure the long-term preservation of the entire property. Ongoing work on the landscape is being carried out in accordance with recommendations for landscape treatment in the Taliesin Historic Landscape Report (1999).

A number of significant conservation projects have been undertaken since the 2015 evaluation of the original nomination. These include the repair of the masonry at the entry steps, the restoration of natural stone walls in the living room and loggia, and repairs to the pool in the garden court and the flagstone outside of the garden room. Structural repairs to the southern lower portion of the Wrights' living quarters, the repair and re-roofing of the west wing, the conservation of the Taliesin breezeway entry roof, and the conservation of the Wright bedroom wing interiors and guest wing and the loggia and loggia terrace were all completed within the last several years. Geothermal heating and cooling were added to the main house in 2016-18. Current projects underway include roofing and drainage projects in the Hillside complex in the buffer zone.

Much of this recent work has also addressed the items identified when Taliesin was included on the World Monuments Fund "Watch List" in 2010. (A subsequent listing in 2014 focused attention on conservation issues involving the Hillside Theater, which, as noted above, are now being addressed.)

(Above right) Structural augmentation of the loggia and loggia terrace floor, Taliesin, March 2013. To address the area where the floor beam had rotted, a replacement beam was sistered to the adjacent joists and resheathed in anticipation of relaying the stone floor.
Photograph courtesy of Taliesin Preservation, Inc.

(Right) The comprehensive preservation project in the loggia and loggia terrace also involved replacing stones on the room's piers that were removed by Wright in order to clad the piers with drywall and plaster. Replacing broken stones in March 2013 and repointing the overall pier preserved a significant feature to the room.
Photograph courtesy of Taliesin Preservation, Inc.

Preservation of the loggia near the entrance to Hollyhock House was completed to investigate surface cracks in the concrete stucco exterior as well as any possible structural problems. Once completed, the surface was repaired and plastered and covered with a coat of paint.
Photograph by Jeffrey Herr, courtesy of Hollyhock House.

HOLLYHOCK HOUSE

Hollyhock House is presently in a good state of preservation with all building components and systems in good condition. Hollyhock House has withstood four major earthquakes, yet some damage occurred in the 1994 Northridge earthquake. Subsequent to that event, Hollyhock House was the subject of an extensive conservation and stabilization program to address the problems stemming from the quake. Although completed a generation ago, a recent project has addressed additional seismic retrofitting in order to better stabilize the house during future seismic events.

To accomplish this work the entire exterior cast art stone frieze was removed; each piece was then cleaned and restored as necessary. Additionally, the entire roof was removed and replaced allowing for the control of dry rot in some roof supports and the installation of flashing where needed. Interior and exterior plaster and stucco was restored or replaced as needed. This preservation program also included mold abatement.

As part of ongoing work within the interior spaces, a replica of the original dining room light fixture was created and installed in 2009. In the period 2009-2012 preservation work was performed on the garage and chauffeur's quarters, the porch, the terrace wall and the library foundation.

Hollyhock House has a well-articulated and documented preservation maintenance plan. In addition to cyclical maintenance, major preservation work continues on the buildings and landscape as part of the overall Barnsdall Park Master Plan (2007). An updating of the Hollyhock House Historic Structures Report was completed in 2010. The City of Los Angeles has entered into a contract for activities to provide comprehensive access to the property for those with disabilities. In addition to developing educational and interpretive material, the project will develop an appropriate solution to enable wheelchair access to the house, which will replace the temporary ramp at the front entrance.

(Far left) Preservation work at Hollyhock House also included an analysis of interior wall surfaces to return the wall of the loggia to its original appearance.
Photograph by Jeffrey Herr, courtesy of Hollyhock House.

(Left) As part of ongoing interior preservation at Hollyhock House, elements such as the kitchen countertops were replaced to replicate their original materials.
Photograph by Jeffrey Herr, courtesy of Hollyhock House.

FALLINGWATER

Fallingwater is in a good state of preservation. Meticulous maintenance by the Kaufmann family, over forty years of professional management, and an effective ongoing cyclic maintenance program, has resulted in a resource that has been maintained in overall good condition since its construction. Due to under-engineering of the master terrace at the time of construction, there was an ongoing deflection of the reinforced concrete terraces and the southern section of the living room. This dangerous sagging in the cantilevered slabs was a gradual process that began soon after the initial construction. Over time the deflection problem also began to put stress on the steel sash and plate glass windows resulting in deformation of the steel sash and glass breakage.

In 2002, a major rehabilitation of the terraces was undertaken in order to arrest the deformation of the concrete terraces. A post-tensioning system using high strength steel cables was installed within the living room floor and its adjacent terraces. The master terrace parapet walls were reinforced with carbon fiber as were the reinforced concrete beams of Edgar Kaufmann Sr.'s terrace. This project successfully addressed the problem of continuing deflection. However, in 2012, new cracks appeared along the tops of the reinforced concrete bolsters supporting the first floor and an old crack reopened on the master terrace. In 2013, electronic monitors were installed on the building but have not recorded serious further changes. A new paint technology was implemented in 2002 that has successfully addressed issues of surface flaking and mold growth. A color analysis was undertaken to identify the original color and the entire house has been repainted. Repointing of the masonry walls and through-the-wall flashing has been done to reduce water infiltration. Currently the steel sash of the doors and windows is undergoing conservation and the window glass is being replaced with ultraviolet light protective glass. This replacement of the window glass is the second comprehensive replacement since the property was constructed

As part or ongoing preservation of Fallingwater, the concrete step canopy of the stairs leading form the main house to the guest house was repaired following cracking and material loss in June 2013. The work provided insight into the concentric arrangement of the canopy's reinforcing system, shown here after treatment with an anticorrosive agent. The concrete was reapplied and the rolled edges of the canopy formed by hand before applying the finish paint coat.
Photograph courtesy of Fallingwater and the Western Pennsylvania Conservancy.

Steel window conservation along the exterior walls of the living room hatch at Fallingwater, September 2001. The steel sash conservation is ongoing, with each window and door frame monitored for corrosion. The paint layer is removed, the steel frames repaired, and an ultraviolet light-filtering glazing replaced.
Photograph courtesy of Fallingwater and the Western Pennsylvania Conservancy.

Living room floor reinstallation at Fallingwater, 2002, view of cable channel anchors following concrete pouring. This work was completed as part of an overall preservation effort to slow the deflection of the house's terraces. Structural monitoring of the terraces in 2013-2014 has proved the post tensioning cable installation beneath the living room floors a success.
Photograph courtesy of Fallingwater and the Western Pennsylvania Conservancy.

HERBERT AND KATHERINE JACOBS HOUSE

The Herbert and Katherine Jacobs House is in excellent condition. The state of preservation of all the major building components and systems is excellent. The current owner has spent the past twenty-five years systematically restoring and then maintaining the house. The most recent work on the house has been the replacement of the flat roof surface. This cyclic maintenance project was carried out as recommended in the Jacobs House Restoration and Preservation Plan. No major preservation work is proposed in the near future.

TALIESIN WEST

The property is in a good state of preservation. Taliesin West has implemented a conservation and preservation program to address building problems, some of which were caused by the experimental nature of much of the original construction. For example, Wright used sand from the site along with stone from the site to create his rubble walls. The combination of materials, along with lime and Portland cement, was not always mixed well causing some areas to need subsequent repair.

Work in recent years has focused on repair and replacement of the site's utility infrastructure. Much of the galvanized water pipe and electric conduits are reaching the end of their service life. Comprehensive upgrades to the gas line, water system and electrical system are in process.

In 2010, Taliesin West was included on the "Watch List" of the World Monuments Fund as a way of drawing attention to some of the building's conservation needs. Following the development of a comprehensive preservation plan, the site was withdrawn from the list in 2014. In 2012, the Foundation Board of Trustees established a preservation oversight committee, comprised of internationally recognized preservationists and scholars.

SOLOMON R. GUGGENHEIM MUSEUM

The building is in a good state of preservation. The building underwent infrastructure improvements and interior conservation from 1988-1992. An extensive preservation and conservation campaign for the exterior was undertaken from 2005 to 2007. In 2005, twelve layers of paint applied over the exterior concrete were removed, allowing for close analysis of the building's surface. Based on monitoring of selected cracks, it was determined that most of the cracking was due to thermal expansion. A new survey and diagnostic technique using lasers was initiated to provide an ongoing data set about the condition of the building's exterior. The museum follows a documented cyclical maintenance program to keep the structure in good condition.

The Guggenheim Museum's Sackler Center for Arts Education, located beneath the spiral rotunda, offered close-up views of the preservation work, May 2005. The museum's circular grid is visible on the floor and mimicked in elements such as the windows into the Sackler Center, the lighting fixtures between them.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation.

Façade with paint removed during preservation of the Solomon R. Guggenheim Museum, 2005. The preservation effort removed eleven layers of paint from the surface, resulting in a revelation that Wright's original pigment was a light-yellow "buff" shade, used only until the early 1960s. The color became more off-white or gray over time, and in the end, the museum was painted off-white, the hue most associated with the building's history.
Photograph by David Heald, courtesy of the Solomon R. Guggenheim Foundation.

4.b Factors Affecting the Property

4.b (i) Development Pressures

UNITY TEMPLE

The site is not facing development pressures that would affect the attributes of the site that convey Outstanding Universal Value at this time. There are no known plans for any significant development near or adjacent to Unity Temple. The building has no windows facing the main street. Unity Temple was designed for an urban context and the evolution of the character of that setting does not in any way adversely impact the essential attributes of Unity Temple. The protections for the buffer zone, described in Section 5, ensures that the setting will not be subject to incompatible development.

FREDERICK C. ROBIE HOUSE

The site is not facing development pressures that would compromise the attributes that convey Outstanding Universal Value. The University of Chicago also owns some of the other properties within the block on which the Robie House sits, as well as other properties to the west and south. The University has committed to preserving the Robie House and will continue to use the adjacent properties in a manner sympathetic to the overall urban residential setting, as required by a Planned Development zoning law enacted by the City of Chicago. (See Section 5.b and c.).The University also has donated preservation easements on several of the properties, which ensures their long-term protection as part of the historic residential streetscape to the north of the Robie House.

TALIESIN

There are no development pressures affecting the property. The Frank Lloyd Wright Foundation owns significant property on all sides of the estate including land extending to the river to the north and east and over bluffs to the south. The property to the west, a farmstead once owned by one of Wright's uncles is owned by the Frank Lloyd Wright Foundation and there is no plan to develop the land.

HOLLYHOCK HOUSE

Although the area surrounding Olive Hill, upon which Hollyhock House is located, has been heavily developed, the house's location high on the hilltop ensures that it continues to overlook the city at a remove. Additional development continues, but significant progress has been made in recent years in establishing better controls to ensure that it will not negatively impact the site's Outstanding Universal Value. The land all around Olive Hill was fully developed more than fifty years ago. The local zoning is for a mix of one-to-three-story buildings. Most existing buildings are one- and two-story structures. Building height would need to be substantially higher to have any visual impact on Hollyhock House.

FALLINGWATER

The property does not face development pressures. The Western Pennsylvania Conservancy owns nearly 2,023ha surrounding Fallingwater. A primary goal of the Conservancy is to protect the entire watershed of Bear Run, the stream over which Fallingwater was built. In addition, a 7,689ha state park is located on the southern boundary of Fallingwater.

HERBERT AND KATHERINE JACOBS HOUSE

The Jacobs House property does not face development pressures. The local laws for the area require low-density single-family detached housing, and the neighborhood is very stable; it has already reached its maximum development under the law. Any new residential construction would have to maintain the general size and scale of the existing residential buildings currently surrounding the Jacobs House. This neighborhood character is reinforced by design guidelines adopted by the Westmorland community organization.

TALIESIN WEST

Scottsdale has experienced substantial growth since Wright established a camp for the Taliesin Fellowship during the winter of 1937-38. Although the site is now surrounded by suburban development, the buffer zone puts it at a considerable distance from the property, and the scale of this development is almost exclusively single-story detached dwellings.

SOLOMON R. GUGGENHEIM MUSEUM

The property does not face significant development pressures in the immediate area. The property in this neighborhood is some of the most expensive in the world and there will always be some development pressure. The museum is included within the boundaries of the locally designated Carnegie Hill Historic District, for which the City reviews new construction for any potential impact on the overall character of the area. The same is true for nearby areas in the Metropolitan Museum Historic District and the Park Avenue Historic District, in addition to residential zoning that limits building heights east of the buffer zone (see discussion on page 291 and map on page 296.). There are no plans for additional development on the parcels immediately adjacent to the museum nor are there any plans to develop any additional portion of the area proposed for inscription. Beyond the buffer zone to the west lies the Central Park Reservoir, which is also a protected landscape and monitored by the Central Park Conservancy. There is no possibility of development in Central Park.

4.b (ii) Environmental Pressures

NO MAJOR SOURCES of environmental deterioration currently affect the properties. Building fabric is closely monitored in all properties to detect any deterioration that may be caused by air- or water-borne pollutants. In addition, ongoing monitoring of trees and other living resources has failed to indicate any major concerns. At Fallingwater, some concern exists with respect to the property's hemlock population, which may be impacted by woolly adelgid, an exotic invasive insect. Hemlocks located within the viewshed are being professionally treated and the infestation in the specimens appears to be under control.

4.b (iii) Natural Disasters and Risk Preparedness

Property	Threat	Contingency Plan
Unity Temple	Unity Temple is located in an area that is occasionally affected by tornadoes. The reinforced concrete structure is capable of sustaining high winds. The building is fire-resistant.	Staff has been trained in emergency procedures. The local government provides professional fire-fighting staff. The site is inspected by the local Fire Marshal on a regular basis.
Frederick C. Robie House	The Robie House is located in an area that is occasionally affected by tornadoes. Reinforcement of the roof structure addressed potential high wind conditions. Up-to-date fire safety systems have been installed as part of the restoration program.	Emergency response training for core property staff takes place on a regular basis. All procedures are in written form and are updated regularly. The Chicago Fire Department inspects the building annually and provides professional fire-fighting services.
Taliesin	Taliesin is located in an area that experiences tornadoes, but the likelihood of the estate being destroyed by a tornado is low. It is possible that the northern part of the property could be flooded by the Wisconsin River; however, the buildings are elevated well above 100-year flood stage. Structural fire is the major threat.	Because of previous experiences with fire, Taliesin is very conscious of the need for fire prevention. Fire suppression systems are in place. Staff has been trained in emergency procedures. An Emergency Response Plan for multiple situations in place as part of a comprehensive fire response plan.
Hollyhock House	Los Angeles/Hollyhock House is located in a major earthquake zone. The 1994 Northridge earthquake damaged the property. The ongoing restoration program has reinforced the structures to forestall future earthquake damage.	Hollyhock House was built as a fireproof structure. The staff has been trained in emergency preparedness procedures and a disaster preparedness plan is in place. The buildings are regularly inspected by the city Fire Marshal.
Fallingwater	Flooding is a potential concern.	Flooding has occurred at Fallingwater on three occasions. However, damage only occurred in 1954 and was limited to the stairs to the stream, which were subsequently reinforced. 24-hour monitoring, moisture meters and quick action to prevent logs accumulating at the stairs have prevented damage during subsequent floods. Fallingwater has a written Emergency Response Plan (updated 2007) that addresses response to flood, fire, high wind and earthquakes, as well as terrorist threats and medical emergencies. Reviewed by the senior staff, the plan provides clear direction for protecting people, buildings and collections. Supporting this document is a shorter Staff Emergency Quick Guide that is located throughout the site for easy access.
Herbert and Katherine Jacobs House	The Jacobs House is located in an area that experiences occasional tornadoes. If a tornado were to strike, it is possible that the house could be seriously damaged. Structural fire is also a potential concern.	As the house is a privately owned, single-family residence, there is no formal contingency plan. The owner has installed smoke detectors and fire extinguishers. There are fire hydrants in the immediate area and the local government provides professional fire response.
Taliesin West	Fire is potentially the greatest danger to the property.	Strict fire prevention measures are in place and regularly reviewed. All staff has been trained in emergency procedures. The local government provides fire hydrants and professional fire response.
Solomon R. Guggenheim Museum	New York City is sometimes subject to hurricanes, which could potentially damage the building. The site is in the center of the island of Manhattan and not in a hurricane evacuation zone. The building is completely fireproof and has advanced fire suppression systems in keeping with its museum use.	The museum staff has been trained in emergency procedures. The New York City fire department regularly inspects the building for potential threats and will respond to any fire situation.

4.b (iv) Responsible Visitation at World Heritage Sites

UNITY TEMPLE

The property is open every day for visitors. Regularly scheduled tours are guided by professional staff to ensure the safety of people and resources. Visitation in 2017 was approximately 12,400 persons. It is projected that the site might see an increase of two percent should inscription on the World Heritage List occur. The building can easily sustain increased visitation without adverse impact to resources or the overall visitor experience. Although the carrying capacity could be increased concern for life-safety issues limits the number of people within the structure at any given time. This limit is set by the local government fire marshal.

It is not expected that visitation patterns through the site will change in any significant fashion in the future. It is expected that overall annual visitation at Unity Temple will rise slightly due to enhanced public awareness from inscription on the World Heritage List.

FREDERICK C. ROBIE HOUSE

The property is open every day for visitors. Tours of the Robie House are limited to sixteen persons on each tour, which is led by a site employee. In 2017, 39,500 visitors toured the property. Structurally the building can easily sustain increased visitation and it has been restored to meet local government code as a public assembly building. It is expected that the Robie House will see as much as a six percent increase in visitation due to increased awareness from inscription on the World Heritage List and its recent preservation efforts.

TALIESIN

The property is open to visitors for tours during six months of the year, usually May to October. In 2017, Taliesin had approximately 28,900 visitors to the property. Numbers of visits are controlled by the easement and limitations of staff and site constraints. Historically, the number of annual visitors has not come close to reaching the capacity for the site; consequently the site, without significant adverse effects, can absorb an increase in visitation. It is projected that the site could see an increase of four percent with inscription on the World Heritage List.

HOLLYHOCK HOUSE

The property is open on a regular schedule for tours. The numbers and access are controlled to minimize any detrimental impact that could be caused to the site. In 2017, Hollyhock House had approximately 25,600 visitors to the site, well below the potential carrying capacity for the structure. It is expected that visitation might increase as much as seven percent from inscription on the World Heritage List.

FALLINGWATER

The property is open to visitors for tours on a regular schedule from mid-March to the end of November. Fallingwater operates on a limited tour schedule during December and the first half of March. The property is closed to tours in January and February. The grounds are open year round. Visitor numbers are controlled by the limited sale of tickets for tours inside the house to avoid adverse effects and to ensure a quality visitor experience. In 2017 visitation to Fallingwater was approximately 175,100 although not all of these visitors are able to enter the house. Visitors to the site can walk the grounds and take advantage of the site's amenities, but entrance to the house is strictly limited to ticket holders who must produce a ticket receipt to the guide before the group enters the house. It is expected that Fallingwater might see as much as a five percent increase in visitation due to inscription on the World Heritage List.

HERBERT AND KATHERINE JACOBS HOUSE

The property is viewable year-round from the adjacent streets, but as the house is a private residence, it is only open to the public a few times per year for tours that have been arranged for directly with the owner. The house has not experienced any adverse effects from visitors or tourists. Inscription on the World Heritage List is expected to increase interest in viewing the site. Because the site is privately owned, the possibility for an increase in the number of house tours is possible, but unlikely. The carrying capacity for the structure is limited most by the size of the rooms and passages. It is not possible to provide an acceptable visitor experience with more than approximately fourteen people in the house at any given time. Given these limitations, the structure is capable of withstanding increased visits. It is projected that many new visitors may visit the site. These visits will be characterized by viewing the property from the adjacent roads as the opportunities for seeing the interior of the house is not expected to rise. The site does presently have a presence on the web to inform visitors about the site, the limited opportunity for viewing the interior of the site, and to direct interested persons to print and other media about the site.

TALIESIN WEST

The property is open for visitors on guided tours seven days a week. The site received approximately 106,300 visitors in 2017. It is expected that inscription on the World Heritage List will increase visitation to the site, perhaps as much as seven percent. The impact of current visitation does not impair historic fabric. Resource professionals will continually monitor the impact of the increased visitation on the historic resources and on the visitor experience.

SOLOMON R. GUGGENHEIM MUSEUM

The building is among the most visited tourist sites in New York City. Over 1,100,000 people from all over the world visited the museum annually. Visitation is not expected to increase significantly with inscription on the World Heritage List. The building can still absorb an increased number of visitors without significant adverse effects. The carrying capacity of the structure exceeds the number of persons allowed in the building at any given time, which is limited by the fire marshal of New York City for life-safety purposes. The public has unguided access to major portions of the building.

Carrying Capacity

Visitor carrying capacity is the type and level of visitor use that can be accommodated while sustaining the desired resource and visitor experience conditions at each individual site within the series. Each of the sites has identified ways to monitor for and address unacceptable impacts on the features that convey Outstanding Universal Value and visitor experiences. These management metrics are based on desired resource conditions and visitor experiences for the site, quality indicators and standards that define the desired resource conditions and visitor experiences, and other factors that have led to logical conclusions and the protection of the attributes that convey Outstanding Universal Value.

The carrying capacity for each site takes into consideration three types of capacity: the physical capacity of the built environment to accommodate reasonable and safe visitor use, the ecological ability of the site to withstand the level of visitor impact, and the quality of the visitor experience that the management feels is essential to convey Outstanding Universal Value.

Possible Deterioration Due to Visitor Pressure

All visitation will cause some resource degradation. The important management considerations are where the damage will occur and how much damage is acceptable without impairing the essential Outstanding Universal Value of the property. As the core features of this series involve the buildings at each site, great care is given to establishing the number of persons who can tour these structures without impairing the critical resources. With the exception of the Herbert and Katherine Jacobs House, most of these sites have been publicly visited for many years. As the uses of the properties are not expected to change, it is not expected that the types and areas of deterioration due to visitor pressure will change. Increased visitation to view the Jacobs House is not expected to impact the adjacent community.

The strategy to address any additional future deterioration from increased visitor pressure is through the existing methods of site presentation, preservation and protection.

4.b (v) Number of inhabitants

Property Component	Population of Property Component	Est. Population in Buffer Zone	TOTAL
Unity Temple	0	125	125
Frederick C. Robie House	0	0	0
Taliesin	20	25	45
Hollyhock House	0	0	0
Fallingwater	0	5	23
Herbert and Katherine Jacobs House	1	20	21
Taliesin West	5	25	30
Solomon R. Guggenheim Museum	0	3000	3000

Approximate number of inhabitants within the property and buffer zone in 2018.

"The houses of Wright more than those of any other architect unite with their natural surroundings in serene and effortless harmony. The pantheism of their author is poetically expressed in their oneness with nature. He has reestablished the ancient lost collaboration between the builder of a structure and the character of a site, and has served in an ancient office, as interpreter between nature and man, translating the spirit of places into shapes that are habitable."

John McAndrew

SECTION 5

PROTECTION AND MANAGEMENT OF PROPERTY

5: PROTECTION AND MANAGEMENT OF THE PROPERTY

THE PROPERTY, *The 20th-Century Architecture of Frank Lloyd Wright*, is a series of components owned and managed by separate entities. Owners include local governments, private non-profit organizations and an individual. The protection and management of such a property is complex, as these functions and their legal basis exist primarily at the level of local government in the United States. The properties are protected by individual legal instruments and local and federal laws, including those protecting National Historic Landmarks, as all the component properties have that federal designation.

The Frank Lloyd Wright Building Conservancy World Heritage Council has been established and functioning since 2012 to provide overall management of the serial property. It consists of one representative from each of the eight component sites, along with the executive director of the Frank Lloyd Wright Building Conservancy and another representative appointed by the Frank Lloyd Wright Building Conservancy president.

5.a Ownership

Unity Temple

Unity Temple is owned by UTP, LLC, a limited liability corporation that combines the Unity Temple congregation and the Unity Temple Restoration Foundation.

Frederick C. Robie House

Robie House is owned by the University of Chicago, a private, non-profit organization.

Taliesin

Taliesin is owned by the Frank Lloyd Wright Foundation, a private, non-profit organization.

Hollyhock House

Hollyhock House is owned by the City of Los Angeles, a government entity.

Fallingwater

Fallingwater is owned by the Western Pennsylvania Conservancy, a private, non-profit organization.

Herbert and Katherine Jacobs House

The Herbert and Katherine Jacobs House is privately owned by James M. Dennis.

Taliesin West

Taliesin West is owned by the Frank Lloyd Wright Foundation, a private, non-profit organization.

Solomon R. Guggenheim Museum

The Solomon R. Guggenheim Museum is owned by the Solomon R. Guggenheim Foundation, a private, non-profit organization.

5.b Protective Designation

Federal Legal Measures (Appendix D)

Historic Sites, Buildings, Objects, and Antiquities Act of 1935, 16 United StatesC. 461-462

The Historic Sites Act declares it a national policy to preserve historic sites and objects of national significance and provides procedures for designation, administration, and protection of such sites. National Historic Landmarks (NHLs) are named under authority of this act; thus it applies to all of the component sites in the series.

National Historic Preservation Act (NHPA) of 1966, 16 United StatesC 470 et seq.; 36 CFR 800; 36 CFR 65

Among other directives, the act requires federal agencies to evaluate the consequence of all federally funded, licensed, or permitted projects on historic properties. Section 106 of the NHPA and its implementing regulations as 36 CFR Part 800 lay out review procedures that ensure historic properties are considered in federal planning processes; this includes the role of the state historic preservation officer (SHPO) in advising and assisting federal agencies in this process.

Section 110(f) of the NHPA requires that federal agencies exercise a higher standard of care when considering undertakings that may directly and adversely affect National Historic Landmarks (NHLs). The law requires that agencies, "to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark." Both the Advisory Council on Historic Preservation and the United States Secretary of the Interior must be invited to participate in any consultation if there is the possibility of an adverse effect on an NHL.

National Environmental Policy Act (NEPA) of 1969, 42 United StatesC. 4321 et seq.

NEPA requires federal agencies that are proposing a major action affecting the quality of the human environment to prepare a detailed environmental impact statement describing the effects of the proposed action. NEPA provides a mandate and a framework for federal agencies to consider all reasonable foreseeable outcomes of their proposed actions and to involve the public in the decision-making process.

Department of Transportation (DOT) Act of 1966, 49 United StatesC. 303; 23 CFR 774

The Department of Transportation Act (DOT Act) of 1966 included a special provision—Section 4(f)—that protects certain parks, natural preserves, and historical areas. It stipulates that the Federal Highway Administration (FHWA) and other DOT agencies cannot approve the use of land for transportation projects from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless there is no feasible and prudent alternative and the action includes all possible planning to minimize harm to the property. The regulations implementing Section 4(f) are found in 23 CFR 774.

State and local legal measures, deeds and private protections: (Appendix C and Appendix E)

Unity Temple

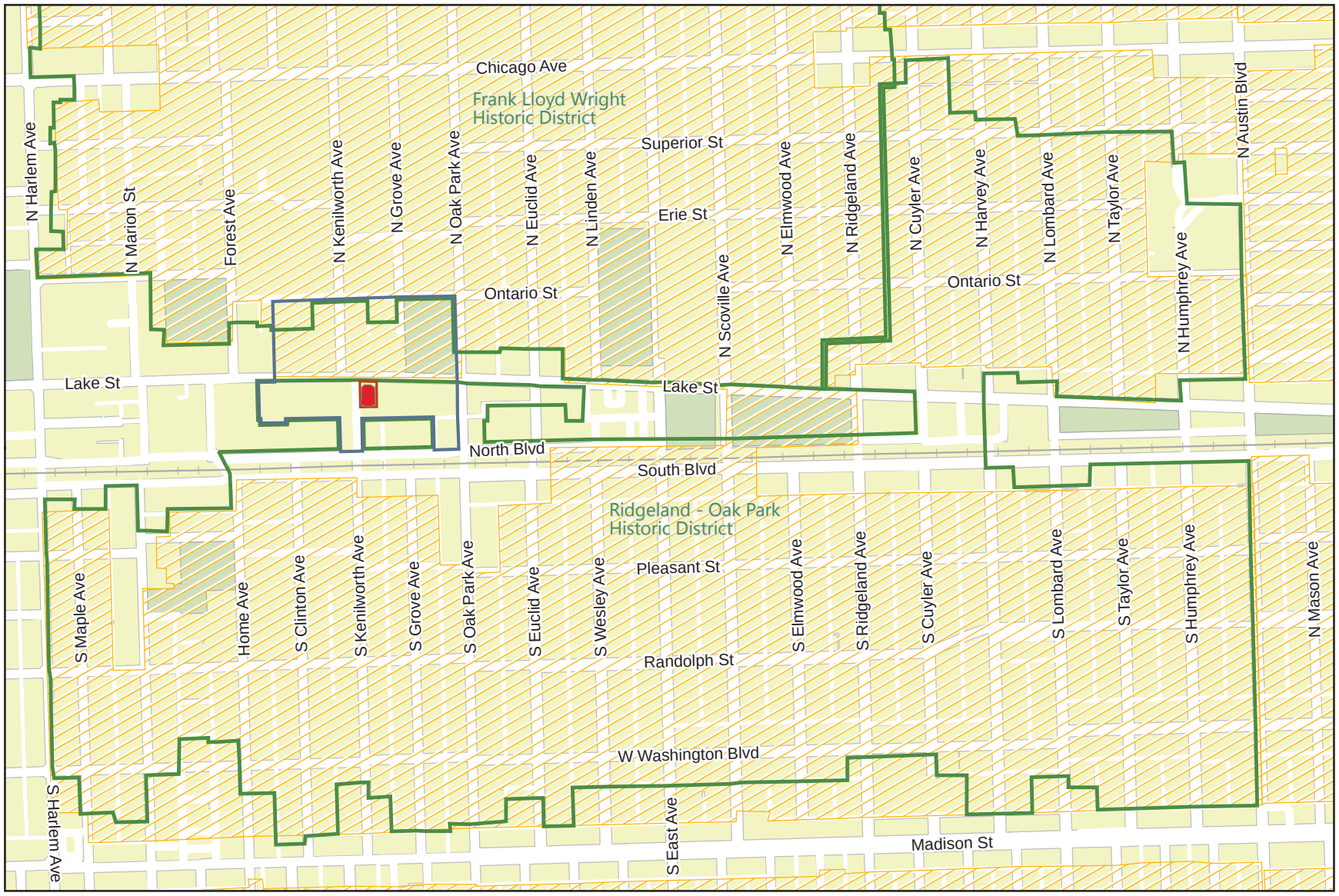
Listed as a **National Historic Landmark** on December 30, 1970.

Unity Temple is protected through a **conservation easement** titled Conservation Right dated January 7, 1987, granted by the Unitarian Universalist Congregation in Oak Park to the Landmarks Preservation Council of Illinois in perpetuity. A copy of the recorded Conservation Right is included in Annex.

Unity Temple is also protected as an **Oak Park Historic Landmark** under the Oak Park Historic Preservation Ordinance. This Ordinance restricts and regulates changes to the exterior of landmark buildings within Oak Park. Unity Temple was designated an Oak Park Historic Landmark and Interior Landmark in 1996 under the authority of the Oak Park Historic Preservation Ordinance, Chapter 7 Article 9 of the Village Code.

Unity Temple is **also located within Oak Park's Ridgeland-Oak Park Historic District**. A section of this district will serve as part of the buffer zone for Unity Temple—to the east, west, and south. The Ridgeland-Oak Park Historic District regulates the appearance of building façades, as well as any proposed alterations. The buffer zone north of Unity Temple includes a portion of the Frank Lloyd Wright—Prairie School of Architecture Historic District and also includes areas zoned for residential use that limits building height to 13.716m, requires minimum 6.096m building setback, and allows no greater than 45% lot coverage for any development projects (see map on page 286).

Unity Temple, Oak Park, Illinois



Frederick C. Robie House

Listed as a **National Historic Landmark** on November 27, 1963.

The Frederick C. Robie House was **designated a Chicago Landmark in 1971** by the Commission on Chicago Landmarks. In 1968, the City Council adopted a landmarks ordinance that gives the Commission the authority to review building permits for landmarks, to ensure that any proposed alterations will not negatively affect the character of the landmark. The Robie House is also a designated **Illinois Historic Landmark**.

The house and the buffer zone are located within a district on the National Register of Historic Places, the **Hyde Park-Kenwood Historic District**, and in **Planned Development Area No. 43**, as defined by the City of Chicago's Municipal Zoning Ordinance. Finally, several neighboring historic properties are protected by private conservation easements that were granted by the owners to the Landmarks Preservation Council of Illinois. Any proposed alterations to the exterior of these buildings must be approved by LPCI, based on the United States Secretary of the Interior Standards for Rehabilitation. These include historic structures immediately north and west of Robie House at 5701, 5710, 5720, and 5730 South Woodlawn Ave.

The area north and east of the property has a **City of Chicago zoning** classification of RS-3, which calls for single-family detached residences on individual lots, further protecting the house's viewshed (see map on page 288).

Taliesin

Listed as a **National Historic Landmark** on January 7, 1976.

Taliesin is protected through a **Historic Preservation Covenant Agreement**, first signed in 2005 and renewed in 2011, between the Frank Lloyd Wright Foundation, as owner of the site, and the State Historical Society of Wisconsin, an agency of the State of Wisconsin.

The term of the Covenant and the Agreement runs with the land in perpetuity, and cover 22.7 hectares that includes the nominated property and a portion of the buffer zone (see page 38). All alterations within this area must be reviewed and approved by the Wisconsin Historical Society.

The property and buffer zone is also located within the **Lower Wisconsin State Riverway**, established by Wisconsin Act 31 in 1989. A State Riverway Board requires permits for structures, timber harvesting, utility facilities, and other activities to protect the aesthetic integrity of the Riverway. Finally, the **local zoning regulations of Iowa County and the Town of Wyoming**, which apply to the rest of the buffer zone, maintain those areas as agricultural land/open space.

Hollyhock House

Listed as a **National Historic Landmark** on March 29, 2007.

Hollyhock House and the surrounding Barnsdall Park are protected by the City of Los Angeles through its designation as a **Los Angeles Historic-Cultural Monument** on January 4, 1963. The regulations providing the legal protections for Hollyhock House are contained in Chapter 9 of the Department of City Planning, Article 1. Section 22.171.11 titled Preservation of Monuments. The regulations state that the Commission "shall take all steps necessary to preserve Monuments not in conflict with the public health, safety and general welfare… of the City of Los Angeles."

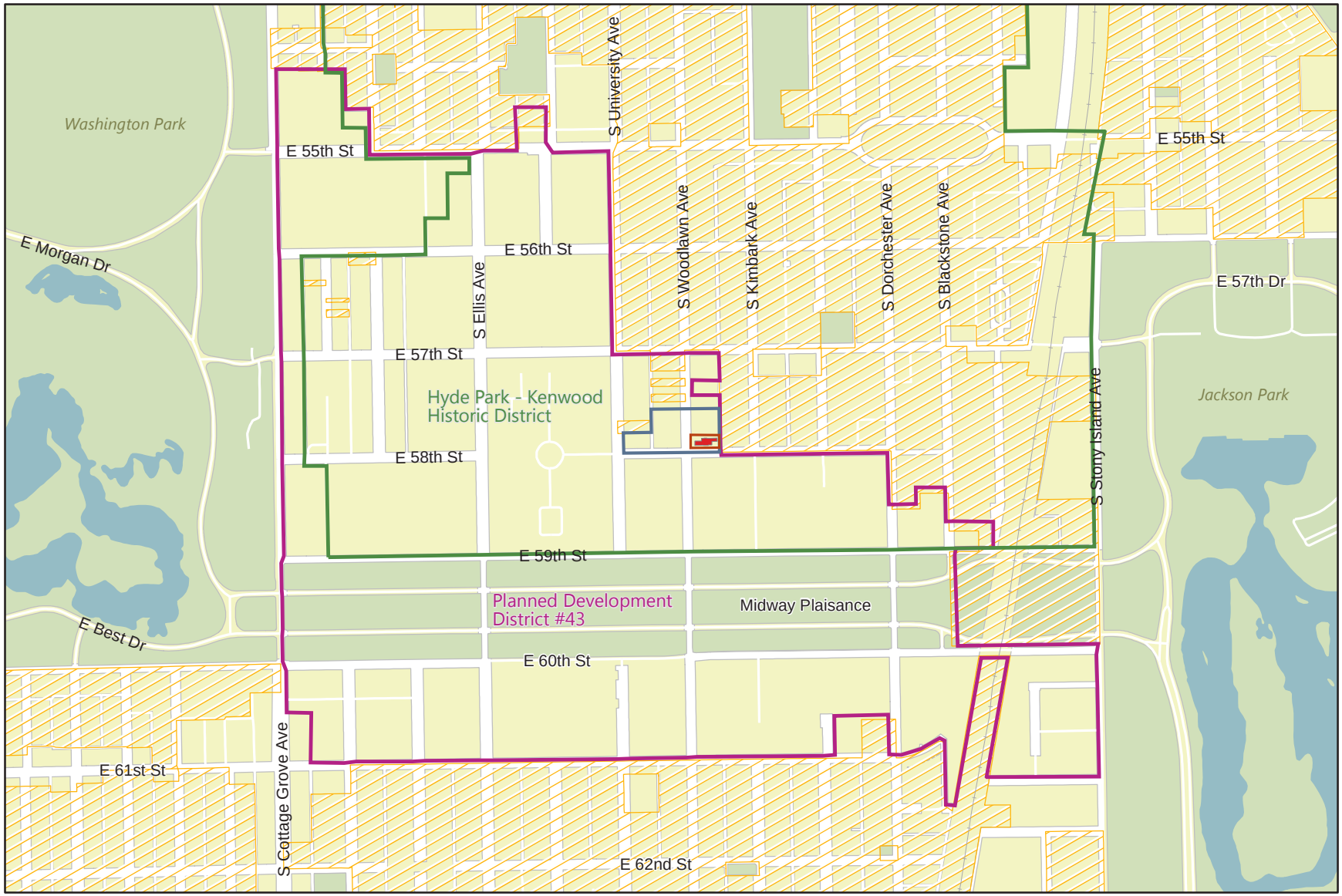
Hollyhock House is also protected through Section 91.8119 of the Code of the City of Los Angeles, Historical Buildings and Structures as amended by ordinance No. 179,324 effective December 12, 2007. Further protections of this historic structure and landscape are contained in **the Agreement Between the Department of Recreation and Parks, Department of Public works and Municipal Arts Department to Provide for the Operation of the Hollyhock House** dated 23, December 1926. This Agreement includes the following language "It is of paramount concern that the Frank Lloyd Wright Hollyhock House be preserved as originally constructed. The structure is not to be altered nor any fixtures exchanged or done away with without the express approval of the Recreation and Parks Department and the Cultural Heritage Board."

Properties listed as HCMs are also protected under the California Environmental Quality Act (CEQA). This statute requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if possible. Such impacts include a substantial adverse change to a historical resource.

As dedicated public park land, Hollyhock House and its grounds are further protected by **Los Angeles City Charter, Sec. 594—Control and Management of Recreation and Park Lands**—subsection (c), which states, "Restrictions on Transfer of Dedicated Parks. All lands heretofore or hereafter set apart or dedicated as a public park shall forever remain for the use of the public inviolate."

The buffer zone is protected on the north as part of Barnsdall Park. On the south, the restrictions of the City's zoning laws ensure that nothing can be built higher than the existing hospital structure. On the east and west, **the City's policy is to limit new construction to a height of 50 feet (15.24m)**.

Frederick C. Robie House, Chicago, Illinois



Fallingwater

Listed as a **National Historic Landmark** on May 11, 1976.

Fallingwater is protected both through a **deed restriction** and through a **trust agreement** that prohibit any use of the site that is inconsistent with it long-term preservation. The deed recital of 1963 states that Fallingwater and its surrounding environment, which constitutes the buffer zone, is conveyed to "the Conservancy, its successors and assigns, forever," and that such conveyance is made to the Conservancy exclusively for the charitable, scientific, literary and educational purposes of the Conservancy, and that in no event shall the site be administered other than exclusively for the purposes of the Conservancy.

The deed limits the Conservancy's use of the site and prohibits the construction of any parking lot or structure of any kind within view of Fallingwater and its immediate grounds, and dictates that the relationship between Fallingwater and its terrain and water shall be preserved. The deed further dictates that "the architectural design and structural soundness of Fallingwater shall be preserved and maintained to the end that this house with its world-wide reputation as a master work of modern architecture may serve the development of architecture and the spiritual and cultural advancement of those who come within its view and influence."

The **trust agreement** acknowledges that the site is conveyed to the Conservancy on the basis of its agreement to preserve, maintain and use the site in accordance with the uses and purposes of the trust imposed by the deed.

A fifty-year **Declaration of Covenants** between the Pennsylvania Historical and Museum Commission (PHMC), an agency of the State of Pennsylvania, and the Conservancy was signed on May 31, 2000. These covenants require that, prior to the commencement of work in the property, including the buffer zone, Fallingwater must notify the PHMC of any repairs or alterations that might affect safety or the historical/architectural character or integrity of the structure or the grounds.

Herbert and Katherine Jacobs House

Listed as a **National Historic Landmark** on July 31, 2003.

The Herbert and Katherine Jacobs House is protected by a **historic preservation covenant** dated March 23, 2010, by and between James Munn Dennis ("Owner") and the State Historical Society of Wisconsin ("Society"). The covenant was recorded December 17, 2010. It creates a valid and enforceable restriction on Jacobs House in perpetuity, pursuant to Section 893.33 of the Wisconsin State Statutes.

Under the covenant, the owner agrees to maintain the property according to the *Secretary of the Interior's Standards for the Treatment of Historic Properties* and that any alterations that may affect the architectural or historical integrity of the house must have the prior written approval of the Historical Society. The **Jacobs House is listed and protected, effective 1974, as a City of Madison Landmark**. In 1980, the Common Council gave the Madison Landmarks Commission the power to deny demolitions or alterations of landmark properties. The Landmarks Commission also has the authority to review proposed changes to parcels adjacent to a designated landmark, in order to ensure their compatibility with the character of the historic landmark. Under Chapter 28 of the **zoning law for the City of Madison**, the Jacobs House and the parcels around it, including the buffer zone, are part of a much larger Traditional Residential—Consistent District 1, described in Section 5.c. below.

Taliesin West

Listed as a **National Historic Landmark** on May 20, 1982.

The area within the proposed enlarged property boundary is designated as a City of Scottsdale **historic preservation zoning overlay** area (2008), which requires that any proposed alterations to the site must be reviewed by the Scottsdale Historic Preservation Commission to ensure their compatibility with the site's historic features. This review includes consideration of the effect of construction on view corridors that extend beyond the zoning overlay into the buffer zone.

A smaller area within the boundary is also protected by a **historic preservation easement** between the Frank Lloyd Wright Foundation, the Arizona State Historic Preservation Officer and the Arizona State Parks Board. This easement was recorded in the Official Records of Maricopa County, Arizona on November 14, 2006, as Document No. 2006-1494115. Section 1 of the Amendment, as modified in 2011, states that the term of the easement is perpetual.

Section 3 of the easement states that the Foundation will retain, maintain and enhance the architectural historic and cultural features of the site in a manner consistent with the Secretary of the Interior's applicable standards during the entire term of the easement and that the Foundation will prevent any use or change that will significantly impair or interfere with the qualities that made the site eligible for its listing in the National Register of Historic Places. Section 5 of the easement states that the Foundation shall not construct, alter, remodel, or undertake or permit any activity on the site that would affect historically significant interior spaces and features, exterior construction materials, architectural details, form fenestration, height or structural soundness of the site without written permission from the State of Arizona affirming that such actions meet the Secretary of the Interior's applicable standards.

Taliesin West, Scottsdale, Arizona – Topographical Map

The buffer zone is currently protected by its ownership by the Frank Lloyd Wright Foundation and its inclusion in the National Historic Landmark designation. The Frank Lloyd Wright Foundation is working with the City of Scottsdale, Arizona to remove development rights from the buffer zone and apply a conservation easement across the entire acreage owned by the Foundation around Taliesin West (see maps on page 47 and 290). This easement will preclude anyone, including the Foundation itself, from building on or otherwise changing the landscape from its current, natural desert state; it will permit temporary exhibition of art, the placement of historic placards, and similar material on site, as well as to conduct work necessary to maintain the landscape. The easement may be held by the City of Scottsdale or by a third party conservation organization. Work with the City is expected to take several years to complete; the Foundation has no intention of pursuing development in the buffer zone prior to securing this easement. Within the easement boundary, the Foundation will reserve an area for construction of a limited number of structures outside of the viewshed from the historic core of the property. These structures include an interpretative (visitors) center relating to Wright's work and the surrounding desert; small student facilities and classrooms for the School of Architecture at Taliesin or Foundation programming. Any such construction will be in conformance with the Preservation Master Plan completed in October 2015.

Solomon R. Guggenheim Museum

Listed as a **National Historic Landmark** on October 6, 2008.

The Solomon R. Guggenheim Museum is protected through its **designation on August 14, 1990, under the Landmarks Preservation Law of the City of New York, as an Individual Landmark and as an Interior Landmark**. Both the property and the buffer zone are located within the **Carnegie Hill Historic District**, which was designated, under the same law, on July 23, 1974, and then expanded on December 21, 1993.

The building's status under the Landmarks Law—New York City Preservation Commission, Title 63 of the Rules of the City of New York—provide robust and perpetual legal protections for its continued preservation. The Landmarks Law places special restrictions on landmark properties, including properties in designated historic districts, stating that "the protection, enhancement, perpetuation and use of improvements and landscape features of special character or special historical or aesthetic interest or value is a public necessity and is required in the interest of the health, prosperity, safety and welfare of the people." Once a building has been designated as a landmark, the owner of a designated landmark may not alter, demolish, or change the use of the structure without the Commission's approval.

5.c Means of Implementing Protective Measures

Introduction: The System and Functioning of Cultural Heritage Protective Laws in the United States

The National Historic Preservation Act, a federal law, provides some protections to properties that have been formally designated as being nationally significant (National Historic Landmarks – NHLs) by the United States Secretary of the Interior. All of the properties currently nominated in the proposed series are National Historic Landmarks. This law requires that federal agencies consider the potential effect of their actions on NHLs, and act to avoid or mitigate any adverse effect, in consultation with the applicable state government. Effects can be direct or indirect and include: physical destruction or damage; alteration; relocation; change in the character of the property's use or setting; introduction of incompatible visual, atmospheric, or audible elements; neglect and deterioration; and transfer, lease, or sale of a historic property out of federal control without adequate preservation restrictions.

NOTE: Properties are designated as NHLs through a voluntary application process that requires the owner's consent. Therefore not all properties that may qualify, including two of the properties proposed as future extensions to the series, currently have this designation, which is required by United States law for World Heritage nomination.

Other federal or state laws protecting the environment may also provide collateral protection to historic properties and their settings.

Actions by private property owners, however, are not covered by the National Historic Preservation Act. The primary protection for private properties in the United States consists of local laws that can take a number of different forms, but primarily consist of:

Historic preservation (or "landmark") laws or ordinances:

These laws may be part of the local government's zoning code (see below) or may be separate laws. They designate districts or individual properties for which proposed changes must be reviewed by a competent authority (usually a municipal commission with a professional staff) before a required building permit can be issued. These laws are accompanied by detailed regulations based on a national standard, the Secretary of the Interior's Standards for Historic Preservation.

Zoning laws:

Zoning laws enacted by the local level of government guide development by determining the height and size of structures, and the uses that are allowed in different locations. Zoning laws divide geographic areas into different "zones" or "districts," each with its own set of rules that determines what can be built. Zoning law is the underlying land-use control in most urban and some rural areas of the United States, falling under the police power rights of local governments to exercise authority over privately owned property. Though the primary purpose of zoning is to segregate uses that are thought to be incompatible, in practice, zoning is used as a permitting system to prevent new development from harming existing residents or businesses. It applies to all the properties in a given area, and is not easily changed.

Zoning may regulate the kinds of activities that will be acceptable on particular properties (such as open space, residential, agricultural, commercial, or industrial), the densities at which those activities may be performed (from low-density housing such as single family homes to high-density such as high-rise apartment buildings), the height of buildings, the amount of space structures may occupy, and the location of a building on the property. Zoning laws vary from one city or town to another, and local governments have considerable latitude to employ special zones for particular purposes.

A third form of legal protection consists of legal restrictions that a property owner voluntarily agrees to, and which are binding on the property even if it changes hands. These are variously called easements or covenants, and are enforced by a third party such as a state government or NGO. An easement or covenant that requires adherence to the Secretary of the Interior's Standards and which is sufficiently comprehensive to cover all significant features of a property will provide highly effective legal protection even if the local government has not enacted specific historic preservation laws.

With that background, the following includes additional and updated information on the legal protections for the buffer zones for Robie House, Hollyhock House, the Jacobs House, Taliesin West and the Guggenheim Museum.

UNITY TEMPLE

The Landmark Preservation Council of Illinois (LPCI), the Grantee of the Conservation Right, may **legally enforce the terms of the Conservation Right** that protects Unity Temple. It does so through its Easement Committee, which reviews all proposals for construction, alteration or repair of the property, using the federal *Secretary of the Interior's Standards for the Treatment of Historic Properties*. In addition, LPCI has the right to make any necessary maintenance improvements or to institute a lawsuit to require those improvements.

Unity Temple's designation as an **Oak Park Historic and Interior Landmark** requires the building's owner to follow the Village's Architectural Review Guidelines when making changes. Any significant alterations that would require a building permit from the Village, including additions or demolitions, **require a Certificate of Appropriateness from the Historic Preservation Commission**. The certificate ensures that alterations are compatible with the historic and architectural character that qualified the structure as a landmark.

FREDERICK C. ROBIE HOUSE

Any application for a City of Chicago building permit for exterior and interior work on the Robie House must be reviewed and approved by the Permit Review Committee of the Commission on Chicago Landmarks. All committee approvals also must be approved by the full Commission. Legal remedies for any violation of the protective measures can be pursued in the courts to enforce protection of the site.

Although it is not possible at this time to formally expand the buffer zone (the University of Chicago, which owns much of the adjacent property, does not wish to have it formally identified in this way), as a practical matter there are several provisions of the City of Chicago zoning law that provide real and substantive protections both in and well beyond the buffer zone. This includes the location of Woodlawn Garden, southwest of Robie House, for which there are not now and have never been any proposals for development. It is highly valued as a garden and open space. The specific legal protections that support this status, and for other areas in the wider setting, are as follows. They have been successful in appropriately regulating development in the setting of Robie House for several decades:

1. The area generally south and west of Robie House on the University of Chicago campus and including the buffer zone is the City of Chicago Planned Development District #43, established in 1966. This district includes Woodlawn Garden. In this district the City of Chicago Department of Planning and Development, including its Historic Preservation Division, must review and approve development, to preserve the character of the larger University of Chicago neighborhood.

This review takes place when any of the following are proposed:*

- A change in the character of the development
- An increase in floor-area ratio for individual lots or the total area
- An increase by more than three dwelling units or 5% of the maximum permitted number of units, whichever is less
- A reduction in the required distance between structures or their setbacks from the street

Such reviews specifically consider:

- Use, bulk, density and intensity
- Transportation, traffic circulation and parking
- Pedestrian orientation
- Urban design
- Building design
- Green design
- Parks, open space and landscaping
- Provision of public, social and cultural amenities
- Promotion of public safety and security
- Prioritization of adaptive re-use of historically significant building
- Protection and enhancement of waterways

2. Northeast of Robie House (extending more than .5km east to Jackson Park and well beyond that to the north) is a residential neighborhood, which is maintained in that character by the City of Chicago zoning code, a local law. The classification of that area (RS-3), limits construction to single-family detached residences on individual lots. As the lots in this area of the city are large, only a small number of other houses can be seen from Robie House. Due to the zoning law, all are of a similar scale.

3. Four houses north of the buffer zone on Woodlawn Avenue northwest of Robie House and included in the Planned Development District, also have private conservation easements held by the non-profit Landmarks Preservation Council of Illinois, which must approve any proposed alterations to their exteriors.

** Please note that documentation on this process and specifically its application to Woodlawn Garden was provided to ICOMOS by letter of October 2, 2015 as part of the package of supplemental information requested by the mission experts.*

Hollyhock House, Los Angeles, California – Topographical Map

1:3,000
0 100 Meters
294

Nominated Property
Buffer Zone
National Historic Landmark
Contour Line Interval: 20 Meters

Projection: Lambert Conformal Conic
Datum: North American Datum 1983
Production Date: September 2018
Gould Center, Department of Geography
The Pennsylvania State University

TALIESIN

Under the terms of the Historic Preservation Covenant, any proposed changes to Taliesin and the portion of the buffer zone included in the covenant must be approved by the Historical Society of Wisconsin, which also serves as the State's Historic Preservation Office. All proposed alterations must be in conformance with the United States Secretary of the Interior's Standards for Rehabilitation. The governments of Iowa County and the Town of Wyoming must review and approve building permits in the rest of the buffer zone to ensure that applications conform to the agricultural and open space requirements of their land-use laws.

HOLLYHOCK HOUSE

Any proposed changes to Hollyhock House and its setting in Barnsdall Park must be reviewed and approved by the Los Angeles Cultural Heritage Commission prior to the issuance of a permit by the City of Los Angeles' Department of Buildings and Safety.

Additionally, the Historic-Cultural Monument designation permits use of the California Historical Building Code, which recognizes and endorses the need—on a case by case basis—to find and adopt reasonable alternatives for situations where strict compliance with established statutes or regulations would negatively affect an historic resource's historic appearance.

City of Los Angeles zoning ordinances offer significant protection to the viewshed from Hollyhock House, both for the buffer zone and beyond. As a result of discussions surrounding the World Heritage nomination, the Department of City Planning has adopted a policy to limit the height of new development in this highly urban setting to 15.24m, specifically to protect views to and from Hollyhock House and Barnsdall Park. This height was determined after Department of City Planning staff conducted viewshed analysis from various public vistas atop Olive Hill using 3-D modeling. They concluded that this height limit (even if one additional story were permitted in situations where density incentives apply) would still protect the viewshed effectively due to the height (141m) and slope of Olive Hill (see map on page 294).

FALLINGWATER

Any proposed changes or alterations to the site, including its buffer zone, must be reviewed and approved by the board of directors of the Western Pennsylvania Conservancy. The protections provided for Fallingwater in both the Deed and Trust Agreement are legally enforceable under the laws of the Commonwealth of Pennsylvania. The Trust Agreement is subject to enforcement by the Attorney General of the State of Pennsylvania.

HERBERT AND KATHERINE JACOBS HOUSE

Any proposed changes to the Jacobs House must be approved by the Historical Society of Wisconsin, which also serves as the State's Historic Preservation Office. All proposed alterations must be in conformance with the United States Secretary of the Interior's Standards for Rehabilitation.

In order to receive a city building permit for work on the Jacobs House, the Madison Landmarks Commission must approve the project and issue a "certificate of appropriateness" (COA), which certifies that the work will be compatible with the historic character of a building and/or its neighborhood. The local protection provided by the Madison Landmark status is enforceable under local law. If the owner undertakes a project without receiving a COA, the Landmarks Commission can issue a work order requiring the owner to either obtain a COA or to remove the work and restore the building to its appearance before alteration. The City may also undertake legal proceedings, which could result in a fine of up to US$200 per day for every day that the project is in non-compliance.

The buffer zone has been expanded, as requested by ICOMOS, to include the other buildings facing the property, on Toepfer Avenue and Birch Avenue. These buildings, as well as the wider neighborhood around the house, are controlled under local zoning law (Section 28.001 of the Zoning Code, Subchapter 28A for the City of Madison) as a "Traditional Residential – Consistent District." Documentation of this law and its implementation was provided to ICOMOS in the State Party's letter of October 12, 2015, in response to the request by ICOMOS for supplemental information.

The purpose of this type of district under the Madison zoning law is stated, to "promote the preservation, development, and redevelopment of traditional residential neighborhoods in a manner consistent with their distinct form and residential character [and to] ensure that new buildings and additions to existing buildings are designed with sensitivity to their context in terms of building placement, façade width, height and proportions, garage and driveway placement, landscaping, and similar design features."

The area shown in the expanded buffer zone is thus maintained with the following restrictions:

- Houses can have a maximum height of two stories
- Houses can cover only 50% of their lot
- Houses must be set back from the street an average of those existing on the same block
- Side walls must be set back to avoid an appearance of crowding

Guggenheim Museum, New York, New York

These requirements have maintained a stable character and scale in the neighborhood that is largely unchanged from the period of the construction of the Jacobs House.

The City of Madison landmarks law also provides additional protections to the three properties on the lots that immediately adjoin that of the Jacobs House. Under this law, the City's Landmarks Commission reviews proposed changes to buildings on those parcels to "determine whether the proposed development is so large or visually intrusive as to adversely affect the historic character and integrity of the adjacent landmark." The proposal would then be submitted to the Madison Plan Commission and the Madison Common Council.

This law was documented in the original dossier, in Appendix A under State and Local Measures.

TALIESIN WEST

Listing on the Scottsdale Historic Register and designation as a Historic Overlay Zoning District means that any proposed alterations to Taliesin West within the enlarged boundary must be reviewed by the City of Scottsdale Heritage Board to ensure the changes do not compromise any of the building's significant historic or architectural characteristics. Applications for building permits are submitted to the City and referred to the Heritage Board, which must issue a Certificate of Appropriateness before a building permit may be issued by the City.

The State Historic Preservation Office enforces the terms of the easement, held by the Arizona Parks Board, that further protects most of the buildings in the complex.

As noted in Section 5.b. above, the Frank Lloyd Wright Foundation through its ownership responsibility, reinforced by National Historic Landmark protections, maintains the buffer zone as protected open space. When the conservation easement now in development is completed and enacted, the City of Scottsdale or a third party will enforce its terms to legally prohibit development.

SOLOMON R. GUGGENHEIM MUSEUM

Any proposed alterations to the Guggenheim must receive a "Certificate of Appropriateness" from the New York Landmarks Commission. Proposals are reviewed by the Commission staff and approved (or rejected) by the Commission itself. This same process is used for any proposed alterations to properties located within the Guggenheim's buffer zone—to the north, east, and south—as that area is also a designated New York City Landmark, which is known as the Carnegie Hill Historic District.

The evaluation by ICOMOS of the nomination submitted in 2015 suggested that the proposed buffer zone should be larger. A clearer explanation of the planning controls that apply both within and beyond the buffer zone, and how they relate to identified viewsheds, should help to allay concerns:

The buffer zone is a portion of the Carnegie Hill Historic District, a New York City landmark district. (See map on page 296.) As a city landmark, any changes to buildings within the district that could affect their exterior appearance must be reviewed by the city's Landmarks Preservation Commission, a professional body composed of heritage experts, to ensure that any changes are appropriate to the character of the district and to the Guggenheim Museum, which is an individually listed structure within the district. The Commission examines any restoration, alteration, reconstruction, demolition, or new construction that affects the exterior of an individual landmark or a building in a historic district, and any project that affects the exterior envelope of the building, even at parts of the building that are not visible from the street. Work that is not considered acceptable cannot legally be undertaken.

The same protections and the same process of review apply beyond the buffer zone to:

- The rest of the Carnegie Hill Historic District, which extends more than 0.5km further to the north beyond the buffer zone and a block further south beyond the buffer zone;
- The Park Avenue Historic District, which lies one block east of the buffer zone;
- The Metropolitan Museum Historic District, which abuts the Carnegie Hill Historic District to the south;
- Central Park, a New York City Scenic Landmark, which lies directly west across Fifth Avenue from the Guggenheim Museum. Central Park is also a National Historic Landmark, which gives it federal protection as well.

These areas are not included in the buffer zone itself because they extend well beyond what can be seen from the vicinity of the museum. The buffer zone was identified as the area where changes to the setting could be perceived by pedestrians in the vicinity of the museum.

The density of construction in Manhattan is such that there are many tall buildings visible further east of Fifth Avenue (beyond the buffer zone), and this was true even at the time of the museum's construction, thus constituting an authentic aspect of the wider setting. Even if another relatively tall building were to be built east of the museum in an area not part of a New York City historic district, it would still be subject to the restrictions of the City's zoning law applicable to residential areas. This law puts strict limits on building height and configuration, maintaining consistency with what is now allowed to be built in the area.

5.d Existing Plans Related to Municipality and Region in Which the Proposed Property is Located

UNITY TEMPLE

Oak Park, Illinois

Envision Oak Park: A Comprehensive Plan for the Oak Park Community (adopted 9/15/14) includes a statement of support for the continued preservation of the Village's historic properties.

This policy plan is designed to guide the Village's decisions involving economic development, housing, land use, public facilities, and transportation/parking.

Key objectives of the plan include supporting the preservation of significant architecture and seeking funding for historic preservation within the community. The Village also maintains an active tourist and visitors program that emphasizes the architecture of Frank Lloyd Wright.

Village-wide Strategic Historic Preservation Plan
(Adopted by the Village of Oak Park, June 2010)

This document describes an integrated strategy for the Village's historic preservation activities This integrated strategy combines the seven categories of issues into four strategic aspects: education about historic preservation, economic development and incentives, Oak Park's historic preservation structure and process, and national preservation issues.

FREDERICK C. ROBIE HOUSE

Chicago, Illinois

Plan for Economic Growth and Jobs
(Adopted 2012; prepared by World Business Chicago)

Among the goals and strategies of this plan, which was prepared in association with the City of Chicago's Department of Housing and Economic Development, are to: foster regional growth, create a premier destination for tourism and entertainment, and upgrade existing attractions and quality of place.

Chicago, Illinois

The University of Chicago Woodlawn Avenue Plan
(Adopted 2012; prepared by the University of Chicago and the City of Chicago's Department of Housing and Economic Development)

Provides policy guidance for future development in the 5700-block of Woodlawn Avenue, where the Robie House is located. The primary goal is to ensure that no existing historic structures on the block are demolished and to "maintain the character and value" of the block. Any proposed changes to properties must be reviewed by the City's Historic Preservation Division as part of Planned Development Area No. 43.

TALIESIN

Spring Green, Wisconsin

Lower Wisconsin Scenic Riverway Strategic Plan
(Adopted 1989; prepared by the Wisconsin Department of Natural Resources)

Provides guidelines and policies for the scenic protection of 31,970ha along the Lower Wisconsin River Valley, including the land surrounding and adjacent to the Taliesin site. Plan objectives include "to manage long-term development pressures that could threaten the outstanding scenic and natural qualities…and a more comprehensive protection of historic sites [within the Valley]." An update to this plan is expected by 2016.

Spring Green, Wisconsin

Town of Wyoming (Iowa County) Comprehensive Plan and Land Use Policy Plan
(Adopted 2004; prepared by Iowa County Department of Planning and Development)

Policies include the protection and preservation of the open spaces, scenic beauty, and rural character of the governmental entity (Town of Wyoming) that includes the Taliesin properties. One of the purposes of the Policy Plan is to protect historic and cultural resources, such as Taliesin, by requiring that any nearby development be "harmonious with the surrounding natural landscape…and to preserve scenic vistas." These plans are enforced through the Iowa County Zoning Ordinance.

HOLLYHOCK HOUSE

Los Angeles, California

Conservation Element of the City of Los Angeles General Plan
(Adopted 2001; prepared by the Los Angeles Department of City Planning)

Provides a policy framework for development and design decisions related to Historic Preservation and Cultural Resources. Specific guidelines are contained in the land use elements of thirty-five community area plans, including one for the area containing the Hollyhock House

Los Angeles, California

Hollywood Community Plan and Vermont/Western Specific Plan
(Adopted 2001; prepared by the Los Angeles Department of City Planning)

Provides guidelines for site planning, building design, and landscaping for the community in which the Hollyhock House is located. Provides landscaping requirements for the commercial zoning districts surrounding Barnsdall Park, where the Hollyhock house is located. Governance through Municipal Ordinance No. 173749.

Los Angeles, California

Barnsdall Master Plan
(Adopted 1995; prepared for the City of Los Angeles Department of Recreation and Parks)

Designed to guide and direct the restoration of the Barnsdall Art Park, the public park where the Hollyhock House is located, to its historic early-1900s garden design. Provides guidelines for the landscaping of parcels along the edge of Olive Hill and the Barnsdall Art Park. Governance through the City's Department of Recreation and Parks.

FALLINGWATER

Mill Run, Pennsylvania

Fayette County Comprehensive Plan
(Adopted 2000; prepared for the Fayette County Office of Community and Economic Development)

Among its goals is the enhancement of economic development and tourism opportunities involving natural and historic resources. In Land Use section, it identifies Fallingwater and the surrounding Bear Run Nature Reserve as "Resource Preservation" and "Rural Conservation" areas.

Mill Run, Pennsylvania

Comprehensive Parks, Recreation, Open Space, Greenways and Trails Plan
(Adopted 2007; prepared for the Fayette County Office of Planning, Zoning, and Community Development)

Addresses the need for open space preservation, tourism, and future greenways throughout Fayette County, including Stewart Township, where Fallingwater is located.

HERBERT AND KATHERINE JACOBS HOUSE

Madison, Wisconsin

City of Madison Comprehensive Plan 2006
(Adopted 2006; prepared by the Madison Department of Planning and Community and Economic Development)

Provides guidance for community facilities, economic development, historic and cultural resources, housing, land use, natural resources, parks/open space, transportation, and utilities. Policies include: "ensuring that redevelopment and infill are compatible with existing historic resources." Establishes the lowest possible residential land-use density (eight units per hectare) for the neighborhood surrounding Jacobs House.

Madison, Wisconsin

Midvale Heights/Westmorland Neighborhood Plan
(Adopted 2009; prepared by the Madison Department of Planning and Community and Economic Development)

Identifies potential transportation and development issues in two neighborhoods proximate to the Jacobs House. Recommends no land use changes for the residential subdivision where the Jacobs House is located, including the maintenance of the current low-density residential zoning. Enforced through City's Municipal Zoning Ordinance.

TALIESIN WEST

Scottsdale, Arizona

City of Scottsdale General Plan
(Adopted 2001; prepared by the Scottsdale Department of Long Range Planning)

Provides the goals and policies for guiding the city's future development, including land uses, economic vitality, and "character and design." Recommends protection of open spaces adjacent to Taliesin West, as well as residential uses in developed areas.

SOLOMON R. GUGGENHEIM MUSEUM

New York City

PlaNYC
(Adopted 2007, with annual updates; prepared by Office of the Mayor, City of New York)

Establishes goals for a "greener greater" New York City, including housing, transportation, and parks/open space.

New York City

Rebuilding Central Park: A Management and Restoration Plan
(Adopted 1987; prepared by the Central Park Conservancy)

Establishes management and preservation goals for this National Historic Landmark, which abuts the Guggenheim Museum to the west.

New York City

Active Design: Shaping the Sidewalk Experience
(Adopted 2013; prepared by the New York City departments of City Planning and Transportation)

Identifies various design guidelines for improving the character and design of sidewalks throughout the city.

5.e Management of the Serial Property

The Frank Lloyd Wright World Heritage Council (FLWWH Council)

The Purpose of the Council

The Council was **established in 2012** as the original dossier was being developed, via a **Memorandum of Agreement** among the Frank Lloyd Wright Building Conservancy and the owners and/or representatives of the owners of the individual component properties (referred to as Stewards.) See the text of the Memorandum on pages 303 to 306. Its purpose is to collaborate on the development of the dossier and to provide coordinated management of the Property, based in cooperation and guided by a common understanding of values, principles, and objectives.

The Operation of the Council

The Council performs its functions by:

- Holding **regular meetings**, recorded by minutes
- Establishing, collecting, and reacting with advice on **annual reports from each component site** (see below) that provide information on conservation and management
- Serving as a **collaborative resource** for the preservation and management of the component sites. The collective experience of the Stewards and the Conservancy guarantees the quality of work undertaken by the Council.
- **Promote and enhance the Property**, including collaborating with other organizations to promote public understanding of the Outstanding Universal Value of the series and related properties, promoting research on the component sites, and recommending other actions. To these ends, the Council will create and maintain for all of the sites:

  (i) a common presentation that focuses on the Outstanding Universal Value of the series and communicates to the public at each site why the Property has Outstanding Universal Value;

  (ii) a presentation of the attributes that convey that Outstanding Universal Value; and

  (iii) a statement of how the works selected to form the series were chosen to reflect those values and attributes. This material will be available at each site and via the Internet.
- **Make and review recommendations on any proposal for future extensions** of the World Heritage property and work with the State Party to secure inscription of such extensions.
- Provide a primary point of contact to the State Party authorities

By signing the Memorandum of Agreement, the **Stewards of each component site agreed to:**

- be actively engaged in the work of the Council

- submit an annual report containing critical information needed to validate responsible management and conservation practices
- participate in an annual meeting to review those reports
- employ best practices in conservation, as defined by the *United States Secretary of the Interior's Standards for the Treatment of Historic Properties*
- share preservation and management practices and plans.

The Frank Lloyd Wright Building Conservancy (Conservancy) coordinates the work of the Council. It is an NGO with offices in Chicago, organized for the purpose of preserving and protecting the remaining works of Frank Lloyd Wright, whether open to the public or in private hands.[1]

The Council serves only as an advisory body, and its recommendations do not supersede individual site management plans or local, state, or national preservation laws, ordinances, or regulations.

Accomplishments of the Council

- Since its establishment in 2012, the Council has **met annually, with additional meetings scheduled as needed** to review the progress of this dossier. Formal minutes of each meeting are prepared and approved by the members of the Council.
- The Council produced the World Heritage **nomination dossier** that was submitted in 2015, as well as the revised version submitted in 2018. Component sites contributed content and funding for the effort, with coordination by the Conservancy. Throughout the process of the nomination, the members have acted in concert, demonstrating exceptional solidarity around the work of Frank Lloyd Wright and the importance of the collective body of work to each of the Stewards.
- Since 2012, the work of the Council has led to **increased awareness among** the Stewards of best practices for management. Many of the Stewards have developed formal plans for management and conservation; others are undertaking such work with the guidance on best practices from those who have completed it.

Additional Actions taken in Support of Responsible Conservation and Promotion of the Property

There are numerous examples of collaboration among the Stewards, often including other organizations, to promote awareness of the Property, responsible visitation practices, and excellence in conservation practices. These practices have inspired collaboration beyond the work done through the Council, extending to other Frank Lloyd Wright sites.

In 2014 and 2018, the Conservancy and the Frank Lloyd Wright Foundation[2] (Foundation) jointly sponsored a meeting of directors of Wright sites that are open to the public, to review and share best practices in these areas. Stewards representing seven of the eight sites within the Property were in attendance. Key directions from this meeting included plans for:

- A shared database of conservation experts available to provide guidance in responsible practice;
- A shared database of materials useful in the conservation and maintenance of Wright's structures and associated landscapes;
- A shared database of visual and other assets to be used in the promotion of Wright's work;
- Collaborative efforts to build support of advocacy relating to heritage conservation; and,
- Collaborative development of educational materials for youth programs around the work of Frank Lloyd Wright, to be shared among all Frank Lloyd Wright public sites.

In 2017, the year in which the sesquicentennial of Wright's birth was celebrated, the Foundation led an effort across more than 20 Wright organizations around the United States to bring Wright's work and legacy, including the sites that comprise the Property, to the attention of the public. This effort resulted in more than 1.52 billion media impressions globally over a six week period, bringing Wright's work to the attention for the public on a scale never achieved before.

1. The Frank Lloyd Wright Building Conservancy was established in 1989 with a mission to "facilitate the preservation and maintenance of the remaining structures designed by Frank Lloyd Wright through education, advocacy and technical services." The Conservancy owns no Wright properties; instead, it functions as a service organization for property owners. It is in constant contact with the owners of Wright buildings, and its board includes owners and executives responsible for the preservation of several Wright buildings including some members (currently three) of the component sites of the Property.
2. The Frank Lloyd Wright Foundation was established by the architect in 1940 to perpetuate his legacy of organic architecture. As the legatee of his physical and intellectual assets at the time of Wright's death in 1959, the Foundation today works in collaboration with other organizations to make Wright's intellectual legacy available to the public and to scholars. In particular, the Foundation has transferred its archives to the Avery Architectural and Fine Arts Library at Columbia University, New York and the Museum of Modern Art, New York, who jointly steward these materials in collaboration with the Foundation. The Foundation also owns two of the sites included within the Property, Taliesin and Taliesin West, and has as its mission "preserving Taliesin and Taliesin West for future generations, and inspiring society through an understanding and experience of Frank Lloyd Wright's ideas, architecture, and design."

The formation and activity of the Council, along with the independent work of the Conservancy and the Foundation, has led to great enthusiasm for the work of Frank Lloyd Wright, including academic symposia; museum exhibitions and programs in the US, Japan, and Europe; documentaries; the creation of new dramatic works; and a reconsideration of Wright's work by leading publications in the field of architecture and design. This public reconsideration of Wright's legacy has in turn resulted in increased support for the conservation of Wright buildings including those not appearing on the list submitted to the World Heritage Committee.

Annual Reports by Component Sites

Prior to the annual meeting, the Steward of each component site submits a report to the Council detailing conditions of its site, as well as actions taken or planned with respect to conservation. The Site Management Report requires each Steward to provide information relating to:

- A reiteration of the **attributes and physical manifestations of the Outstanding Universal Value at the site**, including information about how information about World Heritage and the Outstanding Universal Value is made available to and interpreted for scholars and visitors.
- A brief statement indicating **how the management plans at the site relate to the protection of the site attributes reflecting the Outstanding Universal Value.**
- **Changes to the management of the property since the last report,** including especially:
  - Changes in ownership or responsibility for management
  - Changes in management practices
  - Changes in legal status or protection afforded by law or regulation
  - Number of staff working at the property
  - Annual operating budget
  - Visitation data and responsible visitation management
- Status of, or changes to, **written management plan(s)** for the property
- **Changes to the property since the previous report** that affect integrity or authenticity as defined with respect to the Outstanding Universal Value, specifically including the **monitoring of key indicators** relating to the conservation of the property
- **Preservation/conservation projects** undertaken at the site, including photographic documentation showing the work performed and the identity of organizations and experts involved in the work
  - Separate reports are called for with respect to buildings/structures, collections (e.g., furniture and fittings), and landscape/grounds
- Planned preservation / conservation projects (buildings, collections, setting)
- Site Development Plans
  - Heritage Impact Assessments
- Factors Affecting the Property
  - Development Pressures
  - Environmental Pressures
  - Natural Disasters and Preparedness
  - Visitor and Tourism Pressures
  - Changes Within Property Buffer Zone

These Site Management Reports are shared among all members of the Council to ensure the implementation of good management practice, share information, and provide assistance as required to any component for which a threat may be indicated. These reports also are intended to form the basis for periodic reporting when the Property has been inscribed in the World Heritage List.

The Conservancy keeps all records of the Council in its offices and makes them available via digital collaboration tools available now and in the future. The format and contents of the annual reports have been improved and enhanced over the last several years.

The Council has thus created an ongoing channel for communication with respect to the current situation of buildings and possible changes affecting them. In addition, as described below, the Council works with parallel independent groups that collect and share information bearing upon the Property. Through both formal and informal networks, therefore, any possible threats to the integrity of the buildings that comprise the Property are quickly identified so that the Council may intervene as required. Where necessary, the Council may also alert the National Park Service to concerns relating to a component site; as each component has been designated as a National Historic Landmark, appropriate interventions may be identified by the State Party.

Communication Plan and Memorandum of Agreement

(adopted January 12, 2012, as amended May 8, 2018)

Among:
Unity Temple (Unity Temple Unitarian Universalist Congregation and Unity Temple Restoration Foundation); Frederick C. Robie House (The University of Chicago and Frank Lloyd Wright Preservation Trust); Hollyhock House (City of Los Angeles); Taliesin (Frank Lloyd Wright Foundation and Taliesin Preservation, Inc.); Fallingwater (Western Pennsylvania Conservancy); Jacobs House (James M. Dennis); Taliesin West (Frank Lloyd Wright Foundation); Solomon R. Guggenheim Museum (The Solomon R. Guggenheim Foundation)

I. Background

In 2011, the U. S. Department of the Interior approved a serial proposal of Frank Lloyd Wright sites for nomination to the UNESCO World Heritage List. The proposal, compiled by the Frank Lloyd Wright Building Conservancy, includes Unity Temple, the Frederick C. Robie House, Hollyhock House, Taliesin, Fallingwater, Jacobs House, the S. C. Johnson & Son, Inc. Administration Building and Research Tower, Taliesin West, Price Tower, the Solomon R. Guggenheim Museum, and Marin County Civic Center. Subsequently, S.C. Johnson Administration Building and Research Tower, Price Tower, and Marin County Civic Center were removed from the serial proposal.

Each of these eight sites is sometimes hereinafter referred to as a "Member Site." These properties represent the most iconic, intact, representative, innovative and influential of the more than 400 Frank Lloyd Wright (1867-1959) designs that have been erected. They span almost sixty years of his efforts to create an architecture that integrates buildings with nature and dramatically melds form with space. All aspects of design, from siting to furnishings, reinforce this concept. The properties include houses, places of business, places of worship, educational institutions, museums, and government facilities.

World Heritage listing is a significant honor, one that recognizes a site's Outstanding Universal Value. The addition of this group of sites to the World Heritage List is a great honor for each of the sites and further formalizes these buildings' international importance. Another benefit is the publicity afforded by World Heritage listing, which frequently leads to increased tourism and a corresponding economic impact to surrounding communities. Finally, because inclusion on the World Heritage List indicates a commitment to preservation, international organizations, governments, and foundations often give priority to World Heritage sites through financial and technical assistance.

II. Purpose

Understanding that all the parties share certain core values and a desire to preserve our shared legacy, the purpose of this Memorandum of Agreement (MOA) is to establish an open forum for communication and coordination among the eight sites to ensure that the management of all the Member Sites share a common set of objectives for preservation. As part of a World Heritage serial proposal, each of the eight sites impacts the listing as a whole. Therefore, the Member Sites desire to establish a functional, effective method that facilitates an ongoing exchange of ideas about the preservation of these internationally significant properties. To accomplish this goal, a special council will be established. Called the Frank Lloyd Wright World Heritage Council (FLW World Heritage Council, or alternatively, the Council), this group will serve in an advisory capacity and function as the primary network for communication among the eight Member Sites.

The Council will consist of one representative from each of the eight Member Sites, along with the executive director of the Frank Lloyd Wright Building Conservancy. The structure of the Council is discussed in the attached appendix, entitled "Structure of the FLW World Heritage Council." The appendix is hereby incorporated by reference in this MOA and is subject to all terms thereof.

III. Collaboration

The Council's role is not one of management oversight; each property shall work within its own management structure to promote long-term preservation. The Council's primary function is to serve as a resource to help all sites meet the shared objectives for preservation, and to assist Member Sites by providing a network for property managers and owners to discuss best practices.

The Department of the Interior's National Park Service is required to provide periodic updates to the World Heritage Committee on the preservation status of World Heritage sites in the United States. Through its annual reporting, the FLW World Heritage Council will supply the National Park Service with these required updates for the World Heritage Wright Site.

Therefore, as a member of the FLW World Heritage Council, each Member Site agrees to the following:

1.) Active involvement in the FLW World Heritage Council;

2.) Participation at an annual meeting of the Council and submission of a simple, standardized annual report in form and substance acceptable to each Member Site in its sole and absolute discretion;

3.) Willingness to aspire to best practices as defined by the *Secretary of the Interior's Standards for the Treatment of Historic Properties*;

4.) Sharing of preservation practices and non-confidential, non-proprietary reporting on intended alterations, additions, or major repairs within the designated World Heritage boundary;

5.) Exhibiting a commitment to ongoing documentation of the site and appropriate archival storage of those records;

6.) Communication of non-confidential, non-proprietary information regarding activity in buffer zones, or areas adjacent to the designated World Heritage site boundary, that the Member Site feels may materially impair the preservation of the site. This is undertaken with an understanding that the site may or may not have control over its buffer zone.

7.) Maintaining confidentiality of information identified as sensitive by any Member Site.

IV. Advisory Function

The FLW World Heritage Council will function as the primary forum for open discussion between the sites and will serve only as an advisory body—its recommendations do not supersede individual site management plans or local, state, or national preservation laws, ordinances, or regulations.

Furthermore, it is important to point out that neither UNESCO nor the World Heritage Committee have the judicial authority to compel the United States, this Council, or property owners to take specific actions. The purpose of the World Heritage Committee is to serve as an advisory body promoting international cooperation.

This MOA and the attached appendix are strictly for internal use by the FLW World Heritage Council and its participating parties. It is not a legally enforceable contract between the parties and shall not be construed to create any legal obligation on the part of any of the parties.

V. Modifications, Termination, Duration

This MOA is to take effect upon signature of all Member Sites. It may be amended at any time by the mutual consent of the parties. Since inclusion on the World Heritage List is in perpetuity, the FLW World Heritage Council shall review this MOA annually to determine whether it should be revised, renewed, or cancelled. A Member Site may terminate its participation in the FLW World Heritage Council by providing written notice to the other participants at least five days in advance of the desired termination date. Such withdrawing Member Site's duties, obligations and rights under this Agreement shall terminate effective upon the termination date.

VI. Signatures

This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed an original, but all such counterparts shall constitute one and the same instrument.

/signature on file/_____Date:_____
Unity Temple Unitarian Universalist Congregation

/signature on file/_____Date:_____
Unity Temple Restoration Foundation

/signature on file/_____Date:_____
Frederick C. Robie House
The University of Chicago

/signature on file/_____Date:_____
Frederick C. Robie House
Frank Lloyd Wright Preservation Trust

/signature on file/_____Date:_____
Hollyhock House
City of Los Angeles

/signature on file/_____Date:_____
Taliesin
Frank Lloyd Wright Foundation

/signature on file/_____Date:_____
Taliesin
Taliesin Preservation, Inc.

/signature on file/_____Date:_____
Fallingwater
Western Pennsylvania Conservancy

/signature on file/_____Date:_____
Jacobs House
James Dennis

/signature on file/_____Date:_____
Taliesin West
Frank Lloyd Wright Foundation

/signature on file/_____Date:_____
The Solomon R. Guggenheim Foundation

/signature on file/_____Date:_____
Executive Director
Frank Lloyd Wright Building Conservancy

Appendix

Structure and Operations of the Frank Lloyd Wright World Heritage Council

The following operating procedures will govern the FLW World Heritage Council.

Section 1: Purpose, Organization, and Operation

The purpose of the FLW World Heritage Council is to serve as a collaborative resource for the preservation of the eight sites included in the Frank Lloyd Wright World Heritage serial nomination. This nine-person council will consist of one representative from each of the eight sites (each, a "Site Representative") and the executive director of the FLWBC. The eight Site Representatives will be voting members, and the FLWBC executive director will serve in an ex officio, non-voting capacity.

The Frank Lloyd Wright Building Conservancy will provide for the administrative tasks required by this council.

It is the responsibility of the FLWBC staff to maintain communication with all Site Representatives, organize meetings, maintain records of all reviews and proceedings, and communicate with the United States National Park pursuant to the directive of this Council, regarding World Heritage status. The FLW World Heritage Council will meet annually at locations to be determined by a majority vote of the Council. In preparation for this annual meeting, each site will submit an annual report in form and substance approved by each such Member Site for circulation to all FLW World Heritage Council Member Sites. These written reports will serve as progress reports on activities reported at the previous annual meeting, as well as indicate any new issues or approaches related to site preservation. The format for this written report will be standardized and approved by all the Member Sites, and the FLWBC staff will manage report gathering and circulation.

Section II: Members and Officers

The eight Site Representatives for the FLW World Heritage Council hold the voting power for the council. These representatives are appointed by the individual Member Sites. Vacancies are handled in the same way as initial appointments and each Member Site shall maintain an appointed representative on the Council at all times during its membership. A Member Site will communicate promptly to the Council secretary any change in its appointed representative. FLWBC staff is responsible for orienting new representatives to the purpose and responsibilities of the Council. The current executive director of the FLWBC is automatically placed on the Council as an ex officio, non-voting member. Ex officio members have the right to participate in discussion but do not have the ability to raise a motion or vote. From time to time experts may be called in with the approval of the chair to address specific topics of interest to the group.

The FLW World Heritage Council shall elect a chair, vice chair and secretary for the council, and they shall serve for a term of 2 years.

There shall be no limit to the number of terms an officer may serve.

Section III: Meetings

A. General:

The Council will meet annually at locations and dates to be determined by majority vote of the council. The chair of the Council will preside at all meetings of the Council, with the vice chair presiding in his/her absence. The presiding officer of the Council may specify the use of rules of parliamentary procedure consistent with Robert's Rules of Order. Subject to such reasonable guidelines and procedures as the presiding officer of the Council may adopt, members may participate in a meeting by means of conference telephone or similar communications equipment if all members can hear one another at the same time. Each Member Site may designate an alternative Site Representative (a "Designated Alternate") to represent such site at any meeting by delivering written notice of such designation to the FLWBC staff not less than 5 days prior to the date of meeting.

If an urgent situation arises affecting one or more of the Member Sites, a special meeting of the FLW World Heritage Council can be called by any voting member of the Council with approval of the chair, subject to the notice requirements set forth in Section III.B.

B. Notice:

The FLWBC staff will notify the representative of each Member Site of the annual meeting at least 30 days before the meeting date. The notice will include 1) the name of the Council; 2) the time, date, place, and purpose of the meeting; 3) a copy or summary of the agenda; 4) copies of annual reports from each of the eight Member Sites; and 5) the name and telephone number of the FLWBC staff member who may be contacted for additional information concerning the meeting.

C. Agenda:

The chair of the Council in consultation with the executive director of the FLWBC will draft an agenda for each meeting sufficiently in advance of the meeting to permit a copy or summary of the agenda to be published with the notice of the meeting. The FLWBC staff will distribute the approved agenda to the members before each meeting and will make available copies of the agenda to members attending the meeting. Items for the agenda may be submitted to the chair by any member of the Council.

D. Quorum:

A quorum will consist of six voting members (including the presiding officer and any Designated Alternate) then serving on the Council, excluding ex officio members.

E. Voting:

A member or his or her Designated Alternate must attend a Council meeting either in person or by approved remote method to cast a vote. No proxy voting shall be permitted. When a decision or recommendation of the Council is required, the presiding officer will request a motion for a vote. Any member, excluding ex officio, may make a motion for a vote, second a motion, and cast a vote. Any and all council action based on a vote requires the greater of (i) five votes; or (ii) the votes of a majority of the members attending the meeting, in each case cast at a meeting at which there is a quorum. In addition, upon unanimous consent of the Site Representatives, any vote of the Council may proceed electronically (via email).

F. Minutes:

The FLWBC staff will prepare minutes of each meeting and submit them to the secretary of the Council for certification of their accuracy. The minutes must be certified within 90 days of the meeting to which they relate. The FLWBC staff will distribute copies of the certified minutes to the members. The minutes will include a record of persons present (including members, FLWBC staff, and invited expert guests); a complete and accurate description of matters discussed and conclusions reached; and copies of all reports or other documents received, issued, or approved by the Council at the meeting. Comments or corrections to the minutes may be proposed by any member, and shall be put to a vote at the next meeting for approval or rejection of such changes.

Section IV: Officials

A. Chair

The chair of the Council is elected by the Council by a simple majority of the voting members and serves to perform the duties specified in these operating procedures. The chair's primary role is to preside over meetings and establish the meeting agenda.

B. Vice Chair

The vice chair of the Council is elected by the Council by a simple majority of the voting members and serves to perform the duties specified in these operating procedures. The vice chair will provide assistance to the chair and will in the absence or incapacity of the chair, perform the duties of the chair as specified by these operating procedures.

C. Secretary

The secretary of the Council is elected by the Council by a simple majority of the voting members and serves to perform the duties specified in these operating procedures. The Secretary's primary role is to record the actions of the Council by certifying the minutes of the meetings.

D. Support Staff

The FLWBC executive director will appoint staff of the FLWBC to be responsible for organizing meetings, recording minutes, distributing meeting notices and associated materials, maintaining all Council records, and collecting and distributing site reporting.

Section V: Records

All documents, reports and other material prepared by or submitted to the Council shall be maintained by the FLWBC at its corporate offices and made available to any Council member upon request. Annual site reports are considered part of this record and will be made available to the National Park Service if requested.

Section VI: Expenses

Expenses related to the operation of the Council will be managed by the FLWBC. To fund the operations of the Council, each of the eight Member Sites will pay an annual membership fee not to exceed $500.

The Frank Lloyd Wright Building Conservancy will provide the following deliverables for the members, annually:

- Organization of one (1) in-person meeting
- A minimum of one (1) coordinating conference call
- A minimum of one (1) electronic update to the members
- One (1) annual report of the state of the sites to Council and Department of Interior
- Periodic reports as required by UNESCO World Heritage Centre

Each site shall be responsible for its own expenses in connection with attending meetings, correspondence, and performing duties and responsibilities expected of membership in the Council.

Section VII: Amendments

These operating procedures may be amended from time to time by the affirmative vote of the voting members per the provisions contained in Sections III.D and III.E above.

Frank Lloyd Wright World Heritage Nominated Sites – Management System

UNITY TEMPLE

OWNER	UTP, LLC a limited liability corporation that combines the Unity Temple congregation and the Unity Temple Restoration Foundation
PRIMARY RESPONSIBILITY FOR MANAGEMENT	UTP, LLC is managed by a board comprised of two representatives from the Unity Temple Unitarian Universalist Congregation (UTUUC) and two representatives from Unity Temple Restoration Foundation (UTRF).
OTHER MANAGEMENT ROLES	UTP, LLC is creating a **new position in 2018 of Building Engineer, who will be responsible for developing and overseeing a maintenance program that will monitor the state of conservation.**
GUIDING DOCUMENTS	2006 Master Plan (provided in original dossier) Unity Temple Operating Agreement: as part of the ownership/management structure this agreement between UTUUC and UTRF outlines their respective specific roles in the restoration and conservation management of Unity Temple. (This private document "11-1 Unity Temple Operating Agmt Signed" was provided to ICOMOS in the packet 10.2.15).
FUTURE DOCUMENTS TO BE CREATED	Maintenance plan to be created in the future once the Building Engineer has been hired.
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	The Executive Director and the Board of the Unity Temple Restoration Foundation (UTRF) 1) facilitate the restoration and preservation of Unity Temple; 2) develop financial resources for the restoration and preservation, endowment, and annual operating and maintenance expenses; and 3) develop and/or manage the tour and education program at Unity Temple. Representatives from UTP, LLC meet every 2 months to discuss building management issues and maintenance planning. The UTP, LLC Board of Directors meets quarterly to discuss the long-term planning of restoration and conservation, including approving major capital projects. Since the recent completion of the comprehensive restoration and reopening the building to the public, the impact of visitation is being examined on a monthly basis. Appropriate policies will be developed based on this analysis.
DOCUMENTATION OF PREVIOUS INTERVENTIONS	The construction documents for the 2015-2017 restoration, along with several thousand photographs taken throughout the restoration, now provide baseline documentation. Conservation records of both recent work and past interventions are housed in the office of the Executive Director of UTRF.
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • 2006 Master Plan PROVIDED AS SUPPLEMENTAL INFORMATION IN 2015: • Unity Temple Operating Agreement, April 2015 • Unity Temple Use and Restoration Agreement, April 2015

FREDERICK C. ROBIE HOUSE

OWNER	University of Chicago
PRIMARY RESPONSIBILITY FOR MANAGEMENT	The Frank Lloyd Wright Trust, under a long-term lease from the University, is responsible for the conservation, maintenance, operations, and funding of Robie House, although the University pays for the cost of electricity and water.
OTHER MANAGEMENT ROLES	None
GUIDING DOCUMENTS	Master Plan for the Restoration and Adaptive Use of the Frederick C. Robie House, February 1999 Robie House Preservation Plan (2002) Robie House Maintenance Manual (July 2015; updated October 2015) Core Staff Training Manual • Outlines emergency procedures, is in current use at the site
FUTURE DOCUMENTS TO BE CREATED	As noted in the prior ICOMOS evaluation report, the Trust is currently in the process of developing the **Robie House Comprehensive Conservation Management Plan** funded by a Getty Foundation Grant. The plan will be written by in-house staff working with Harboe Architects. Projected completion is April/May, 2019. The process will include input from the Preservation Committee and the public. The plan will incorporate all existing standards and plans that have been previously developed into one comprehensive plan for the building and site. The Conservation Management Plan **will include a section on Visitor Management and Daily Visitor Operations and risk assessment.**
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	The Trust's Preservation Architect oversees, recommends, implements and reports on preservation and conservation projects to the President and CEO. Preservation-related reports are given at regular meetings of the Trust's Board of Directors. The Frank Lloyd Wright Trust Preservation Committee, consisting of Trust Board and staff members, two representatives from the University of Chicago's planning and facilities departments, private architects and Wright experts, reviews conservation work prior to implementation. The Frank Lloyd Wright Trust Board of Directors approves the annual and long-term preservation plans. All work on the Robie House follows the **Conservation and Restoration Philosophy** that is contained in the Maintenance Manual and was provided to ICOMOS in October 2015.
ANNUAL PLANNING	**The Preservation Plan is updated annually** by the Trust's Preservation Architect. This review informs the next year's budget planning process. The President and CEO and the Trust Preservation Committee review the projected conservation work. The Trust works with the University to maintain an acceptable volume of tourism at the site, including a **policy on the maximum size and frequency of tours with respect to their impact on the house.** The Trust meets annually with the University art and history departments to review and discuss programming at Robie House for the coming year. The Trust interacts regularly with various University departments to schedule special tours for visiting scholars, events, and academic Wednesdays, when public tours are suspended to allow professor-led University classes use of the house.
DOCUMENTATION OF PREVIOUS INTERVENTIONS	The documentation for all past restoration, records, and archives are housed off-site at the Bellwood Center.
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • Robie House Restoration Work Plan, November, 2012 • Robie House: Program Plan, November, 2012 PROVIDED AS SUPPLEMENTAL INFORMATION IN 2015: • Robie House Maintenance Manual, including the Preservation Philosophy statement • The University of Chicago Woodlawn Avenue Plan Sub-Area 0, 2012 - 2016 (Robie House)

TALIESIN

OWNER	Frank Lloyd Wright Foundation	
PRIMARY RESPONSIBILITY FOR MANAGEMENT	The Frank Lloyd Wright Foundation, which has a Board of Trustees with a President and CEO.	
OTHER MANAGEMENT ROLES	A local charitable organization, **Taliesin Preservation Inc. (TPI)**, has been contracted to operate public programming, and also secures support for preservation efforts at Taliesin through public and private funding channels.	
GUIDING DOCUMENTS	**Taliesin Preservation Policy Revised May 2013** (provided to ICOMOS in the 10.2.15 packet of supplementary information), a document that guides conservation projects based on an assembly of historical documentation. Taliesin TPI- FLLW Foundation 2014 **Memorandum of Understanding**	**Taliesin Stabilization and Restoration Master Plan**, 2008 **Strategic Landscape Plan**, 1998 Taliesin Historic **Landscape Report**, 1999
FUTURE DOCUMENTS TO BE CREATED	**A comprehensive management document, which will be prepared by Foundation staff in 2018-19**, will address for both Taliesin and Taliesin West all aspects of management policies, including interpretation, staff training, volunteer management, risk management, and maintenance, as well as conservation. A **cyclical maintenance plan** will be completed within the next year.	
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	A **Preservation Oversight Committee** reviews and advises on conservation projects. The committee, for both Taliesin and Taliesin West, includes members of both the Frank Lloyd Wright Foundation and TPI boards, as well as outside experts from other Wright sites and organizations like the National Trust for Historic Preservation. The Vice President of Preservation plans, recommends, implements and reports on conservation projects. The collaboration between the Frank Lloyd Wright Foundation and TPI has been strengthened through **recent clarification of responsibilities, and deferred maintenance is now a recognized priority with associated staffing and budgetary suppor**t. (See update in Section 4.a. on conservation issues addressed.) The enhancements to the management process, through more formal planning, are strengthening management effectiveness.	
ANNUAL PLANNING	Taliesin is managed through **an annual rolling 3-year strategic planning process**, and an annual budget process. Following the development of the strategic plan each year, an **operating plan** for the year is established on a departmental basis, laddering up to the overall goals and objectives of the strategic plan. This plan is approved by the President and CEO of the Foundation. Progress toward goals is measured routinely and reported quarterly to the Foundation's Board of Trustees. In collaboration with TPI, the Foundation establishes goals for conservation projects undertaken by TPI, as well as public programming conducted on site by TPI. **The leadership of both organizations meet monthly to prioritize and direct conservation work at the site.** (See "Taliesin TPI FLLW Foundation 2014 MOU" provided to ICOMOS as part of the 10.2.15 packet of supplemental information.) In 2017-18, conservation priorities focus on the **reduction/elimination of the deferred maintenance backlog** so that major conservation projects can commence.	
DOCUMENTATION OF PREVIOUS INTERVENTIONS	Documentation of previous work is currently kept in hard copy in the Preservation Office of Taliesin. Digitization and uploading of these documents to a dedicated computer server is in process.	
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • Taliesin Stabilization and Restoration Master Plan (excerpts), 2008 • Taliesin Preservation Policy, May 2013 ATTACHED HERE: • Taliesin Collection Disaster Plan, December 2015 • Taliesin Fire Policy, October 2015 • Taliesin Safety Maps, July 2016 • Taliesin Special Event Policy, June 2017 • Taliesin 3-year Plan (2017-2019)	PROVIDED AS SUPPLEMENTAL INFORMATION IN 2015: • Taliesin Preservation Policy Rev May 2013 • Taliesin TPI FLLW Foundation 2014 MOU • Taliesin Fire Plan, December 2014 • Taliesin Historic Landscape Report, 1999 - Includes management and landscape treatment guidelines • Taliesin Historic Preservation Commission Strategic Landscape Plan, 1998

HOLLYHOCK HOUSE

OWNER	City of Los Angeles	
PRIMARY RESPONSIBILITY FOR MANAGEMENT	Department of Cultural Affairs (DCA) is responsible for the **administration, conservation, and programming of Hollyhock House, and prepares the annual budget.**	
OTHER MANAGEMENT ROLES	The site is managed under a 1980 operating agreement between three departments of the City of Los Angeles: Cultural Affairs, Recreation and Parks, and General Services. The Department of Recreation and Parks manages the Barnsdall Park **landscape** beyond the immediate setting of Hollyhock House. The Department of General Services is responsible for **general building maintenance** for Hollyhock House under the direction of DCA and the curator.	
GUIDING DOCUMENTS	Operating Agreement Barnsdall Park Cultural Facilities, 1980. Historic Structures Report, 1992; and its supplemental updates. Barnsdall Park Master Plan, November 1995. Docent Training Manual 2018 (interpretive guidance)	
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	The decision making process for conservation at Hollyhock House and its immediate setting is authorized and guided primarily by the **Operating Agreement for Barnsdall Park Cultural Facilities, which establishes the conservation goals and standards for the long-term preservation of the property** and gives the Curator authority to identify and undertake conservation work. **The Historic Structures Report provides more detailed guidance for specific conservation actions** and is updated as needed. **Cyclical maintenance** consists of: • Regularly scheduled inspections of the roof (weekly) and interior finishes (daily), with issues documented • The curator incorporates identified issues into a prioritized conservation agenda for treatment. • Work done on an annual basis during the scheduled October closure includes repairs to the floor finish, wood conservation, conservation cleaning of the art glass • Other special projects are also undertaken during the annual October closure. **The Curator maintains a list of pending projects for longer term completion** (such as replacing the current unsightly security fence on the grounds), which are prioritized for completion based on annually available funding. These projects are organized and supervised by the Curator. **Before undertaking such projects, the Curator contracts for an update to the Historic Structures Report, which will then provide documentation** as the basis for conservation guidance for treatment.	
ANNUAL PLANNING	Hollyhock House has an internal evaluation process that identifies and prioritizes conservation and management activity on an annual basis for the coming year. The Curator undertakes an **annual revenue and expenditure analysis** of the previous fiscal year and projects programming for the coming year. **Using the list of conservation needs identified through cyclical inspections and longer-term planned projects**, the Curator develops an annual budget that is submitted to DCA. Hollyhock House closes during the month of October for annual cleaning, restoration and maintenance projects. During this time, all systems, collections and the structure are thoroughly inspected.	
DOCUMENTATION OF PREVIOUS INTERVENTIONS	The Historic Structure Report (1992) provides baseline documentation of previous interventions. The relevant section is updated for each new restoration project to provide a record of the change. A physical archive is maintained on site in the former chauffeur's quarters. This archive includes all available records, both paper and electronic, of all restoration and conservation projects undertaken at Hollyhock House.	
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • Barnsdall Park Master Plan, November 1995	ATTACHED HERE: • Operating Agreement Barnsdall Park Cultural Facilities, 1980 • Historic Structure Report, 1992 • Hollyhock Supplemental Historic Structure Report, October, 2009 • Docent Training Manual 2018

FALLINGWATER

OWNER	Western Pennsylvania Conservancy (WPC)	
PRIMARY RESPONSIBILITY FOR MANAGEMENT	WPC Board of Directors and the Fallingwater Director	
OTHER MANAGEMENT ROLES	None	
GUIDING DOCUMENTS	Edgar Kaufmann jr's (the donor) **vision statement** for presentation and program for the site. **Preservation Maintenance Plan (2010) addresses routine and cyclical maintenance activities** including housekeeping, and annual activities such as wax stripping of floors and winterizing of the building. 2018-2020 **Strategic Plan** (updated every three years) **Landscape management plan** (2002) **Housekeeping Manual** (2018)	
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	The **preservation maintenance Plan informs the development by the Fallingwater senior staff of three-year strategic plans**, which is approved by the Director and WPC Board. The 2018-2020 WPC Strategic Plan includes goals, objectives and actions for preservation, collections, education, visitor services, public relations, administration and capital improvements at Fallingwater. **Preservation protocols are maintained by the Director of Preservation and Collections for other cyclical activities** such as ongoing structural monitoring (every six months), concrete repair (annually), mortar repointing (annually), painting of exterior and interior concrete (as needed), conservation of the steel window sash (as needed), conservation of wood furniture and cabinetry (annually), and artwork conservation (annually). Fallingwater's **other preservation activities** are also led by the Director of Preservation in consultation with the site's contracted preservation engineers, preservation architect, concrete consultant, and artwork and wood conservators. Proposed projects are developed by the Director of Preservation and reviewed and approved by the Director. Progress reports are made at bimonthly senior staff meetings, quarterly strategic planning meetings, and through monthly department reports presented semi-annually to the Fallingwater Advisory Committee and annually to the WPC Board of Directors.	
ANNUAL PLANNING	Progress toward meeting the goals of the strategic plan is reported quarterly at the planning committee meetings and to the Board of Directors. **Annual operational plans** are prepared by department managers with specific actions that are reviewed and approved by the director. The Fallingwater **budget is prepared annually** by department managers and approved by the director. This budget includes conservation projects. Following the director's review and approval, it is submitted to the WPC's Chief Financial Officer and President for review and approval. The budget is then submitted to Board of Directors for approval at the December meeting of the board. The budget is reviewed quarterly with actual expenditures compared against those budgeted.	
DOCUMENTATION OF PREVIOUS INTERVENTIONS	Fallingwater's Collections Storage Building holds all documentation of previous interventions, from circa 1920 to the present, including letters, drawings, photographs, film footage, reports, and oral histories. Reports are prepared for all current preservation and conservation projects at the completion of the project; included in the reports are treatment recommendations for future action. Recommendations are folded into the base-line documentation, annual planning and the three year strategic planning objectives. Reports are kept in electronic computer storage in multiple locations for redundancy.	
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • 2008 Strategic Plan PROVIDED AS SUPPLEMENTAL INFORMATION IN 2015: • Interpretation–Management Plan for the Fallingwater Landscape 1997 • Fallingwater Landscape Master Plan 2002 • Fallingwater Collections Management Plan 2005 • WPC 2015-2017 Strategic Initiatives and Goals (Fallingwater) • Fallingwater Operational Goals 2015 • Fallingwater Viewshed	ATTACHED HERE: • 2018-2020 3-year strategic plan • 2018 operational goals

HERBERT AND KATHERINE JACOBS I HOUSE

OWNER	James M. Dennis
PRIMARY RESPONSIBILITY FOR MANAGEMENT	The house owner is responsible for all conservation planning and maintenance work.
OTHER MANAGEMENT ROLES	An offsite house manager monitors the house when the owner is absent and arranges tours with prior approval by the owner. The owner contracts with preservation specialists as needed for advice and to execute projects.
GUIDING DOCUMENTS	**Jacobs House Management Plan (October 2015)** provides a preservation philosophy, outlines key areas of concern that will be monitored and a routine maintenance schedule.
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	As a small private home, the house has a simple maintenance plan that incorporates a written protocol for maintaining various building elements and records conservation and management practices that have been followed on a regular basis for 34 years under the current ownership. (The plan was provided to ICOMOS in October 2015 in the 10.2.15 packet with file name "22 Jacobs House Mgmt Plan".) Within the scope of his own private finances the owner determines expenditures for needed maintenance and major conservation projects.
ANNUAL PLANNING	Not applicable
DOCUMENTATION OF PREVIOUS INTERVENTIONS	The owner maintains a complete record of major conservation activities during his ownership. The City of Madison also maintains a record of building permits issued for the property.
KEY DOCUMENTS PROVIDED	PROVIDED AS SUPPLEMENTAL INFORMATION IN 2015: • **Jacobs House Management Plan, October 2015**

TALIESIN WEST

OWNER	Frank Lloyd Wright Foundation
PRIMARY RESPONSIBILITY FOR MANAGEMENT	The Frank Lloyd Wright Foundation, which has a Board of Trustees with a President and CEO.
OTHER MANAGEMENT ROLES	None
GUIDING DOCUMENTS	**Taliesin West Preservation Plan** **Phase 1**, completed in May 2015 includes a chronology of the buildings, a statement of preservation philosophy, assessment, recommendations, and priorities for conservation. Taliesin West Preservation Priorities 3-year plan (2017-2019) Cyclical maintenance plan Housekeeping manual
FUTURE DOCUMENTS TO BE CREATED	**Taliesin West Preservation Plan** **Phase 2**, which will be prepared by Foundation staff in 2018-19, will address for both Taliesin and Taliesin West all aspects of management policies, including interpretation, staff training, volunteer management, risk management, and maintenance, as well as conservation.
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	A **Preservation Oversight Committee** reviews and advises on conservation projects. The committee, for both Taliesin and Taliesin West, includes members of both the Frank Lloyd Wright Foundation and TPI boards, as well as outside experts from other Wright sites and organizations like the National Trust for Historic Preservation. The Vice President of Preservation plans, recommends, implements and reports on conservation projects.
ANNUAL PLANNING	Taliesin West is managed through an **annual rolling 3-year strategic planning process**, and an annual budget process. Following the development of the strategic plan each year, an **operating plan** for the year is established on a departmental basis, laddering up to the overall goals and objectives of the strategic plan. This plan is approved by the President and CEO of the Foundation. Progress toward goals is measured routinely and reported quarterly to the Foundation's Board of Trustees.
DOCUMENTATION OF PREVIOUS INTERVENTIONS	Documentation of previous work is digitized and the documents are uploaded to a dedicated computer server.
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • Taliesin West Preservation Philosophy and approach (excerpts), September 2014 • Taliesin West: 2014 preservation department goals (excerpts from original plan), 2014 PROVIDED AS SUPPLEMENTAL INFORMATION IN 2015: • Taliesin West Preservation Plan (Phase 1), October, 2015 ATTACHED HERE: • Taliesin West Preservation Priorities 3-year plan

SOLOMON R. GUGGENHEIM MUSEUM

OWNER	Solomon R. Guggenheim Foundation
PRIMARY RESPONSIBILITY FOR MANAGEMENT	Board of Trustees of the Solomon Guggenheim Foundation with the Director of the Solomon R. Guggenheim Museum and Foundation.
OTHER MANAGEMENT ROLES	None
GUIDING DOCUMENTS	The museum maintains at all times a five-year **Capital Project Plan**. This document **contains an overarching set of preservation principles** that guide all work on the building (page 2, Section C of the plan for 2013 - 2018). These long-range plans are updated on an annual basis to accommodate changing internal and external factors. **Maintenance Contract:** incorporates regular tasks for the care of the building. **Standard exhibition planning** includes comprehensive cleaning and refurbishment of finishes between exhibitions.
OVERALL DECISION MAKING PROCESS FOR FUTURE CONSERVATION	The management team consists of the Senior Deputy Director and Chief Operating Officer and the Director of Facilities who continually assesses maintenance needs and conservation of the building, and discuss at bi-weekly meetings. The Foundation is advised on an ongoing basis for exterior and interior work by the engineering firm of Thornton Tomasetti, which is contracted to provide investigation and analysis services for the building. Monitoring of cracks in the exterior occurs every quarter and is assessed by the Guggenheim's Facilities Department, working closely with Thornton Tomasetti. The Museum's Visitor Experience Department manages the large number of visitors to this site.
ANNUAL PLANNING	The Facilities Department recommends projects and budgets to the Senior Deputy Director and Chief Operating Officer for inclusion in the Capital Project Plan which is updated on an annual basis. Recommended projects are included in the proposed annual budget and acted on by the Board of Trustees.
DOCUMENTATION OF PREVIOUS INTERVENTIONS	Archives are in an offsite location with the Archives team at the Foundation's corporate offices in Manhattan. These include **original documents of the building construction as well as records of subsequent interventions.**
KEY DOCUMENTS PROVIDED	PROVIDED IN ORIGINAL DOSSIER: • Excerpt from *Solomon R. Guggenheim Museum Capital Project Plan 2013 – 2018* ATTACHED HERE • *Capital Project 2018 Update*

5.f Sources and Levels of Finance

Unity Temple is owned by the UTP, LLC; members of the LLC are the Unity Temple Unitarian Universalist Congregation and Unity Temple Restoration Foundation (UTRF). UTRF is a secular, nonprofit 501(c)(3) corporation that supports the preservation of the site. See also Section 5e. Unity Temple has a budget of US$740,000. The primary source of support (98%) is from gifts and grants. The restoration of Unity Temple was completed in September, 2017. The Congregation contributed $1.75 million to the project; the balance of the funding was raised and/or procured by UTRF. Unity Temple reported no deficit or surplus in the last five years.

Robie House is owned by the University of Chicago and leased in perpetuity to the Frank Lloyd Wright Trust, which manages and operates it. The Trust is responsible for the preservation of the site and for its public operations. The Trust owns one other Wright site and operates tours at a total of five Wright sites, including Robie House, in the Chicago area. The 2018 annual operating budget of the Trust is approximately US$6.2 million. The sources of support for the Trust are: tour revenue 37%, merchandise revenue 37%, grants from foundations and government agencies, and gifts from companies and individuals 8%, earned income, special programs and events 15%, membership 3%. There have been operating surpluses in the last nine fiscal years.

Taliesin is owned by the Frank Lloyd Wright Foundation, and jointly operated for public engagement by Taliesin Preservation Inc. Financial support for preservation, operations, and maintenance are provided by both organizations. The total annual operating budget for Taliesin Preservation Inc. is US$2.04 million, while that of the Foundation is US$9.1 million. The Foundation provides support for Taliesin through its fundraising efforts, as well as through income earned by licensing intellectual property associated with Frank Lloyd Wright; this is described more fully above for Taliesin West. Taliesin Preservation support is derived from public access programming (59%), retail store sales (31%), and other contributed and earned income. Support also comes as labor donated from the students and faculty of the School of Architecture at Taliesin. Expenditures are matched to revenues closely. Any small surplus at year-end is applied to the new year operating expenses.

Hollyhock House is owned by the City of Los Angeles and operated by the Department of Cultural Affairs. Annually City Council allocates funding to all City departments. The departments, in turn, determine how the funding is allocated internally. Hollyhock House receives funding from three departments: Cultural Affairs, Recreation and Parks and General Services. The combination of the services provided by these three departments provide the fundamental funding to maintain the property: maintenance and utilities, conservation and restoration, salaries and programs. Neither the City budget nor departmental budgets contain line items for Hollyhock House (or other facilities) allocations making it impossible to provide a precise calculation of total annual funding. A fair estimate of the value contributed by City department funds to the Hollyhock House annual budget is US$350,000. Additional revenue from ticket sales increases the budget in excess of US$100,000. Hollyhock House also receives grants and private donations which has exceeded US$4.5 million in the past five years. Hollyhock House is also supported by the, Barnsdall Art Park Foundation, a 501(c)3 organization.

Fallingwater is a program of a larger organization, the Western Pennsylvania Conservancy. The annual operating budget of Fallingwater alone is US$7.94 million (FY2017). The sources of support are: tour admissions 43%, museum store 30%, endowment 14%, café 8%, government grants 3%, and other sources 2%, including foundations grants, events, membership and licensing. The percentages from these sources have remained consistent over the last 10 years. Revenue meets expenses and there have been annual operating surpluses since the 1990. All surpluses are held in reserve for Fallingwater and help to support major capital and preservation projects. These projects are also supported through special fund-raising initiatives.

Herbert and Katherine Jacobs House is privately owned and is 100% funded by the current owner through a limited tour program and the owner's private funds. All monies collected from tours are allocated to the house maintenance fund. The present owner has preserved and maintained the house in excellent condition for the past 30 years through these funding sources.

Taliesin West is owned and operated by The Frank Lloyd Wright Foundation. The annual operating budget for the Foundation is US$9.1 million (FY2017/2018). The sources of funding and support are public access program revenues, rentals, and other events 40%, museum store sales 20%, gifts, grants, and membership (from individuals, government, corporations, and foundations) 18%, licensing of Frank Lloyd Wright intellectual property 17%, and other sources. The Foundation developed a Preservation Master Plan in 2015, and uses that plan to approach all of its preservation work at Taliesin West. It is anticipated that

the gifts and grants percentage therefore will increase significantly over the next five to ten years due to the capital campaign. In 2017, the Foundation divested the School of Architecture at Taliesin into a separate legal entity for which it has no financial responsibility or control; this eliminated a structural deficit in its annual operating budget.

The Solomon R. Guggenheim Museum is owned and operated by the Solomon R. Guggenheim Foundation (the "Foundation"). The annual 2018 operating budget of the Museum is US$45.5 million. The sources of support are: admissions 30%, individual donations/contributions and grant revenues 17%, exhibition and project sponsorship 16%, retail and publications 14%, membership 8%, investment income 7%, traveling to non-Guggenheim sites 4%, restaurant 1% and 3% is derived from other sources including licensing and loan fees. Capital and preservation projects are supported through special fund-raising initiatives and by capital grants from the City of New York. Currently, the Foundation is planning a new capital campaign in the amount of US$128.2 million to support endowment and educational efforts. Per the Foundation's Form 990, deficits occurred in 2009 and 2010, largely attributable to net unrealized gains and losses in investments. Cash surpluses and shortfalls are overseen by the Board of Trustees.

5.g Sources of Expertise and Training in Conservation and Management Techniques

THE COMPONENT SITES of the property nomination are members of the Frank Lloyd Wright World Heritage Council. The Council serves as a network for site managers and owners to discuss best practices, sharing conservation and management informational resources. Many of the sites have professional staff with years of training and expertise at the Wright sites they currently manage or have prior experience at other historic sites. The sites report on conservation/management challenges and directly tap the expertise of their fellow Council members. The Council also assists sites to identify relevant external resources.

The Frank Lloyd Wright Building Conservancy has a national network of resources at United States universities including the directors of graduate level programs in historic preservation as well as practicing preservation managers and architects specialized in preservation principles and techniques. Each site has access to their state historic preservation office (SHPO). These offices cooperate with the US Secretary of the Interior and the Advisory Council on Historic Preservation, and other federal and state agencies, local governments, and organizations and individuals to ensure historic properties are taken into consideration at all levels of planning and development and they provide public information, education and training, and technical assistance especially as related to the federal and state historic preservation programs.

As National Historic Landmarks, all ten sites actively participating in the nomination have direct access to the National Park Service of the United States and its considerable expertise as the major national level preservation organization of the United States government.

Each site has its own network of organization resources which include:

Unity Temple
- Oak Park Historic Preservation Commission
- Landmarks Illinois
- Illinois Historic Preservation Agency

Robie House
- Commission on Chicago Landmarks
- Landmarks Illinois
- Illinois Historic Preservation Agency

Taliesin
- Wisconsin Historical Society
- The Association for Preservation Technology
- National Preservation Institute
- University of Wisconsin—Madison College of Engineering
- University of Wisconsin—Milwaukee School of Architecture and Urban Planning

Hollyhock House
- Cultural Heritage Commission of the City of Los Angeles
- Landmarks California
- California Department of Parks and Recreation – Office of Historic Preservation

Fallingwater
Pennsylvania Historical and Museum Commission
Western Pennsylvania Conservancy

Herbert and Katherine Jacobs House
Wisconsin Historical Society
Madison Trust for Historic Preservation
Madison Landmarks Commission

Taliesin West
Arizona State Historic Preservation Office
Arizona Preservation Foundation
Scottsdale Historic Preservation Commission

Solomon R. Guggenheim Museum
New York City Landmarks Preservation Commission
New State Office of Parks, Recreation and Historic Preservation

5.h Visitor Facilities and Infrastructure

THE NOMINATED PROPERTY has sufficient infrastructure and facilities to accommodate visitors. The management plan mechanism for the property considers both the desirability of visitor access and the need to protect and conserve the property and its Outstanding Universal Value. Educational programs, tours and special events enhance the visitor experience, utilizing staff and trained volunteers—details for each component site are provided below.

Because the component sites vary greatly in their situations (some were designed for heavy public use, others not, some expect and will encourage larger numbers of visitors, others will not etc.), the Frank Lloyd Wright World Heritage Council (FLWWHC) does not plan to develop a visitor management strategy that would fit all eight buildings in all instances. However, the FLWWHC has identified principles of visitation that include the following:

- Monitoring indicators, adjusted over time, will help establish baselines for limits of acceptable change to each property. If visitor levels are causing unacceptable physical or management impacts to the property, visitor levels will be managed and reduced if necessary.
- Providing accommodations for the disabled in accordance with the Americans with Disabilities Act. Any temporary accommodations made in response to complaints by the public will be monitored, with clearly stated and limited time frames for replacing the temporary measures with appropriate and legally acceptable alternative means of access and enjoyment of the site. Each site will develop, if not in place already, an access plan that will make temporary measures unnecessary.
- Respecting the building's original function, if that function is still applicable, and the values associated with that function, be it a place of worship, place residence, place of civic engagement, etc.
- Guaranteeing a high quality visitor experience and adjusting programming should data (comments, surveys, reviews, etc.) show the experience is declining because of an too many visitors, poor volunteer/staff training, a lack of maintenance or issues of security or safety.
- Ensuring funds are in place to support the sites' operational and preservation needs through the development of an appropriate business plan and compelling vision to engage stakeholders.

The marketing and interpretation plans for the individual sites and collectively are described in Section 5.i.

UNITY TEMPLE

Tours and Programs: Unity Temple is open to the public for guided tours of the main spaces year round five days a week. In addition to guided tours and self-guided audio tours in eight languages, the site offers programming for students, teacher training, and social programs and events. The entrance hall to Unity Temple serves as an orientation space with ticketing and information services. Audio tour services are also hosted in this area. The Sanctuary and Unity House provide venues for lectures, musical performances and other events. The Sanctuary seats 350, while Unity House can seat 175.

Access and Parking: The CTA Green Line L (Chicago Transit Authority) provides direct train service to Oak Park from downtown Chicago at low cost and stops four blocks from the site. The exterior, entry hall, and main floor of Unity House are all wheelchair accessible. The main floor of the Sanctuary is accessible with the use of an elevator lift. There is one accessible restroom on the main floor of Unity House. A parking garage directly opposite Unity Temple has 79 parking spaces, including four accessible spaces. An additional garage two blocks east of Unity Temple has 340 parking spaces, including ten accessible spaces. Street parking is also available.

Visitor Information, Amenities and Safety: Unity Temple is one of five Frank Lloyd Wright buildings in the Chicago area operated for public tours and programs by the Frank Lloyd Wright Trust. Trust activities include tours, workshops, teacher training, student internships, school outreach, family activities, multimedia programs, a preservation and restoration resource center, library/archive, a membership program, a travel program, and multi-channel merchandising. Unity Temple participates in a coordinated highway wayfinding/street signage program with the Village of Oak Park. Safety and security training is performed by site personnel semi-annually. In case of emergency local municipal emergency responders from the Village of Oak Park are used.

Area Amenities: Oak Park is 16km west of downtown Chicago. Home to the greatest concentration of Frank Lloyd Wright buildings in the world, Oak Park is a thriving community with hotels, accommodation, and ample amenities to support visitation to Unity Temple.

FREDERICK C. ROBIE HOUSE

Tours and Programs: The Robie House is open to the public for guided tours year round, five days a week. In addition to regular and in-depth tours, the site offers programming for students, teacher training, training in preservation for young adults, and social programs and events for adults. A museum store with ticketing and information services is housed in the former garage. The historic playroom on the ground floor serves as an orientation space, screening an introductory film at the beginning of each tour. Tours include the exterior, ground floor, main floor, and third floor.

Access and Parking: The exterior and ground floor of the Robie house are wheelchair accessible. For visitors unable to access the upper floors, trained docents provide an illustrated tour using historic and modern photographs. Two accessible restrooms are located on the ground floor. A public parking garage with 1,050 spaces is located within a few blocks of Robie House. Extensive street parking is also available. Public transportation by bus and train is also available with a six-block walk.

Visitor Information, Amenities and Safety: Robie House is one of five Frank Lloyd Wright buildings in the Chicago area operated for public tours and programs by the Frank Lloyd Wright Trust. Trust activities include tours, workshops, teacher training, student internships, school outreach, family activities, multimedia programs, a preservation and restoration resource center, library/archive, a membership program, a travel program, and multi-channel merchandising. Safety and security training for site personnel is performed semi- annually and includes emergency preparedness. As a University of Chicago-owned building, the University of Chicago Police are first responders to all emergencies in conjunction with the City of Chicago Fire and Police Departments.

Area Amenities: The Robie house is located 11km south of downtown Chicago. Chicago and its suburbs are home to the greatest concentration of Wright buildings in the world. As the largest and most-visited city in the Midwest, Chicago provides hotels, accommodation, and public transport to support visitation.

TALIESIN

Tours and Programs: The Taliesin Estate is open to the public for guided tours daily from May 1 to October 31, and weekends in April and November. The buildings available for touring are Taliesin and, in the buffer zone, Hillside and Tan-y-deri; tours are offered on a variety of topics. The Frank Lloyd Wright Visitor Center, located 400m from the estate is open April to November. The Frank Lloyd Wright Visitor Center includes a ticket desk, café, bookstore/gift shop, meeting space for up to fifty people and an introductory video.

Access and Parking: There are wheelchair accessible restrooms and a parking lot that holds approximately two hundred cars with designated spaces for the handicapped and ample space for buses. Three shuttle buses are available to take all visitors to and from the estate for tours. With a two-week notice, private tours are available for guests with wheelchairs or any other mobility issues at no additional cost.

Visitor Information, Amenities and Safety: A pictorial booklet of the main buildings and interior spaces on the estate and a DVD are available for sale in the visitors' center. The site includes hiking trails. Taliesin has a website with information on visiting as well as information on the history of the site. Located in every building and shuttle are first aid kits, maps and instructions for fire, weather, and bomb threat emergencies. When open to the public there are various staff members that are trained in first aid and cardio pulmonary resuscitation (CPR). Taliesin is located approximately 8km from the nearest Emergency Medical Technician/Fire station.

Area Amenities: Taliesin is located outside the small community of Spring Green but is a popular attraction for visitors worldwide. There is a variety of lodging available including a resort hotel, motels, inns, bed and breakfasts and rental properties. Taliesin participates in several surrounding community chamber of commerce as well as several brochure distribution programs.

HOLLYHOCK HOUSE

Tours and Programs: Public tours, both docent-led and self-guided, of Hollyhock House are available five days a week throughout the year, except for holidays and during the month of October. Special group tours are offered to seniors and elementary school children. Barnsdall Park is open daily to the public. The Hollyhock House garage serves as a visitors' center and has an exhibit area with interpretative information on the history of the property.

Access and Parking: Hollyhock House is wheelchair accessible. Viewing for all visitors is restricted to areas accessible by wheelchairs. There are wheelchair accessible restrooms for visitors located in the adjacent Los Angeles Municipal Arts Gallery and disabled parking spaces are provided. Hollyhock House can be reached by Metro; the Vermont/Sunset Red Line station is located adjacent to Barnsdall Park at the intersection of Vermont Avenue and Sunset Boulevards. Barnsdall Park is served by multiple bus lines on Hollywood and Sunset Boulevards, and Vermont Avenue.

Visitor Information, Amenities and Safety: Hollyhock House is situated in a 4.856ha public park designated solely for arts activity in the eastern sector of Hollywood, which is part of the City of Los Angeles. The park has directional and informational signage for visitors. Both city (culturela.org) and foundation (Barnsdall.org) websites contain information about the park and Hollyhock House. Barnsdall Park also includes the following facilities that are open to the public: the Los Angeles Municipal Art Gallery, and the Junior Arts Center, offering arts education to children and adults. There is twenty-four hour security on site.

Area Amenities: Hollyhock House is located approximately 8km northwest of downtown Los Angeles. It is within walking distance of the cafes, shops, and theatres that comprise a local area known as Los Feliz. A major hotel is two Metro stops away and the tourist district of "Old Hollywood" is three Metro stops away.

FALLINGWATER

Tours and Programs: All of Fallingwater is open to the public for guided tours with the exception of the basement and the staff's quarters, now administrative offices. Tours of the house and landscape are offered six days a week, mid-March through November and on weekends in March and December. Regular, In-depth, Special Needs, Children's, Special Focus, Landscape, and self-guided Grounds Tours are offered. The Visitors' Center has an information and ticketing area, an enclosed exhibit area with interpretive panels on Fallingwater's history, architectural concepts and preservation; a café that seats 100; a museum store; and a changing exhibition gallery.

Access and Parking: Wheelchair ramps serve the Visitors Pavilion. An electric bus is available to transport individuals with difficulty walking between the Visitors Center and house. Fallingwater has over a hundred steps, and only the main floor is accessible to wheelchairs. There is a special tour for those unable go upstairs that includes a film on Fallingwater shown on handheld digital tablets and guided transport to a wheelchair accessible trail that ends at an overlook with a view of Fallingwater. There are wheelchair accessible restrooms and a parking lot that holds approximately 185 cars with designated spaces for the handicapped, and space for eight buses. Other facilities related to visitor experience or interpretive services: a staff library, a family room for people with small children not able to tour; meeting space for up to three hundred people and houses for interns, resident students, teachers and outside consultants.

Visitor Information, Amenities and Safety: The site has 32km of signed and mapped trails for hiking and camping. Fallingwater also participates in a coordinated highway wayfinding signage program and a brochure distribution program. Fallingwater has a website with information on visiting as well information on the history of the building and its collections. There is also twenty-four hour security onsite. When open to the public there is always someone onsite trained in wilderness search and rescue, first aid and cardiopulmonary resuscitation (CPR). There are also four defibrillators located at the site.

Area Amenities: Fallingwater is located in a popular resort area consequently there is a wide variety of lodging available including several resort hotels, inns, bed and breakfasts and rental properties.

HERBERT AND KATHERINE JACOBS HOUSE

Tours and Programs: The Herbert and Katherine Jacobs House is a private residence. Tours are arranged on request and are scheduled through the house website (www.usonia1.com). The house receives about 200 to 250 tour participants a year with forty percent of those being organized bus tours (three to four buses per year) and the balance in small groups of two to six persons. Neighborhood walking tours also provide information without inside access.

Access and Parking: The house is not wheelchair accessible and there are no plans provide accessibility in order to preserve the historic fabric of the small house. There is limited public and bus parking on the streets nearby; buses are encouraged to park off-site and return for passenger pickup after the tour is over. The house is located on a major bus route of the Madison Metro public transportation system and two blocks from the bus stop.

Visitor Information, Amenities and Safety: The Madison Trust for Historic Preservation, a local historic preservation advocacy group, conducts historic walking tours of several historic neighborhoods in the Madison area. One of those neighborhoods is Westmorland which is where the Jacobs House is located. These tours are scheduled monthly during the summer and fall seasons. The Jacobs House is one of the more important houses on the Westmorland tour. The tours are exterior only. Given that it is a private home, emergencies services if needed are provided by the City of Madison Fire and Police Departments. The Visit Madison tourism agency is prepared to help develop a brochure for visitor information with the assistance of the FLW World Heritage Council and the Wright in Wisconsin organization.

Area Amenities: Many visitor services (lodging, restaurants) are available nearby. Madison is the state capital of Wisconsin.

TALIESIN WEST

Tours and Programs: Guided public tours are offered seven days per week; 5 days a week during June through August. Tour times range in length from one to three hours. Tours offer guests the opportunity to explore the historic buildings and grounds, the surrounding desert preserve, and the desert shelters constructed by the students of the School of Architecture at Taliesin. Visitors can access Wright's former office, the Garden Room and the Wrights' living quarters, the Kiva Theater, the Music Pavilion, and the Cabaret Theater. Areas that are closed to the public include the guest and private residences, school spaces and Frank Lloyd Wright Foundation offices. Tours of the desert preserve and desert shelters are offered on select days November through April, weather permitting.

Access and Parking: Parking is available on site. There are two paved parking lots and a gravel lot at the entry with 141 parking spaces including wheelchair accessible spaces. An additional forty-nine spaces are available along the access road. There are accessible restrooms in the bookstore. Steep-sloped ramps over steps are available for guests to use at their own discretion throughout the tour. Hearing impaired guests may request an interpretive guide. Sign language interpreters accompanying hearing impaired visitors or assistants for visually impaired guests on the tour are admitted free of charge. Certified service dogs and white canes are permitted on all tours.

Visitor Information, Amenities and Safety: Taliesin West has a website with information on visiting as well as on the history of the site and its collections; there is free wifi for all visitors. There is nighttime security on the site. When open to the public there are staff members available on site who are certified in first aid. There is one defibrillator on site. Scottsdale Fire and Rescue is located within 3.2km of the site.

Area Amenities: Taliesin West is located 19.3km from downtown Scottsdale, Arizona, a popular resort city. Visitors can find shopping, restaurants and fuel within one kilometer of Taliesin West. Within 11.2km visitors can find a variety of lodging, ranging from resort to economy accommodations. Surface street signage provided by the city directs visitors to the site.

SOLOMON R. GUGGENHEIM MUSEUM

Tours and Programs: The Guggenheim's galleries are open to the public every day except Thursday, while the museum's retail store is open seven days a week. Tours and gallery programs are facilitated by trained and knowledgeable Guggenheim educators. Visitors of all abilities and ages are encouraged and welcome to participate in tours and gallery programs. The Guggenheim mobile application covers special exhibitions, selections from the permanent collection, and architecture of the building.

Access and Parking: The museum is wheelchair accessible except for the High Gallery, which is at the top of the first ramp and accessible by two low stairs. Standard manual wheelchairs are available. For visitors who are blind or who have low vision, the mobile application includes verbal descriptions and large- and regular-print versions of the museum's guide are available at the admissions desk. For visitors who are deaf or hard of hearing, the app has transcripts of all tour stops and is T-coil compatible. Parking is available on adjacent city streets and in nearby parking garages. The Guggenheim is located on several public bus lines and is a short walk from the nearest subway station.

Visitor Information, Amenities and Safety: Guides to the museum and its architecture are available on site and on the website http://www.guggenheim.org/new-york/about/frank-lloyd-wright-building. There is a wide variety of lodging and restaurants available, including both a café and a restaurant on-site. The Guggenheim's location is included in a New York City wayfinding/signage program. The Guggenheim has a website with information on visiting as well information on the history of the site and its collections. There is also twenty-four hour security onsite. When open to the public there is always someone onsite trained in first aid and cardiopulmonary resuscitation (CPR). There are also four defibrillators located at the site.

5.i Policies and Programs Related to the Presentation and Promotion of the Property

EACH COMPONENT SITE will have individual opportunities to promote awareness of the World Heritage program, awareness of the inscription of the property and understanding of the Outstanding Universal Value of the property and to provide for the transmission of this information to future generations. This will be accomplished through joint or collaborative activities undertaken by the Frank Lloyd Wright World Heritage Council; through the individual actions of each component site related to their individual ongoing publications, interpretative materials, docent training, events and other activities; and through initiatives undertaken by the Frank Lloyd Wright Building Conservancy.

Upon inscription the sites plan to undertake some or most of the following (this will vary by site):

- Incorporate World Heritage and Outstanding Universal Value information in site interpretive materials and docent training.
- Ensure that board members and site spokespersons at each site are versed in World Heritage information and the Outstanding Universal Value propositions for the individual site so those can be integrated into public presentations and in discussions with donors and supporters.
- Convene special events on a local, regional and/or state level focused on celebrating World Heritage inscription.
- Identify the site as a World Heritage property with a World Heritage logo, as appropriate, in publications, press releases and signage located at the site.
- Include, where appropriate, World Heritage identification on stationery.
- Explain the World Heritage program, the significance of inscription and the Outstanding Universal Value on the site website or blog with a link to the UNESCO World Heritage website.
- Collaborate with local, regional and state convention and visitors bureaus to develop appropriate events and materials highlighting the property's World Heritage status.

The Frank Lloyd Wright World Heritage Council will discuss plans to collaboratively develop materials and activities including the following:

General guidelines and core materials adapted from the nomination to be used to communicate the Outstanding Universal Value of the nominated property, its importance in the development of modern architecture internationally and how the component sites relate to each other. These core materials will be evaluated by a group of modernism experts and the individual sites will have the opportunity to integrate and adapt these materials into their site-specific materials.

Core resources packet on the Wright World Heritage sites for primary and secondary school teachers in connection with school visits; packets may be adapted for specific use by each site.

Coordinated distribution of public announcements of inscription to architectural media and tourism media.

The Frank Lloyd Wright Building Conservancy, as the preparer of the nomination and the administrative arm of the Frank Lloyd Wright World Heritage Council, will undertake the following in addition to the activities of the individual sites:

- Include World Heritage content in its general articles placed architectural and general media.
- Feature the inscription and the Outstanding Universal Value of these Wright sites in Frank Lloyd Wright Building Conservancy publications. The Conservancy already devoted an entire issue of its magazine SaveWright (Spring 2010) to the World Heritage program, the nomination and inscription process in general, and the history of the Conservancy's involvement to date.
- Highlight the World Heritage inscription at the Conservancy's annual conference following the inscription; in addition to the Wright property highlight issues related to other World Heritage modern architecture sites, perspectives on general issues involved in the nomination and selection process, and the preservation of World Heritage sites in general.
- If the Conservancy takes the decision to publish a new edition of its publication *Wright Sites: A Guides to Frank Lloyd Wright Public Places*, the new edition will include World Heritage information.
- Incorporate into the Conservancy's outreach to national and international tourism outlets specializing in architectural interest tours, emphasizing the World Heritage status of some Wright sites.
- As a part of its contacts with university historic preservation, art/architecture history, and architecture programs on a regional basis make these entities aware of the Wright site status.

The individual sites plan to undertake the actions outlined below.

UNITY TEMPLE AND FREDERICK C. ROBIE HOUSE

The Frank Lloyd Wright Trust manages the visitors programs for both Unity Temple and Robie House. For the purposes of this section the two component sites are herein combined since they are part of the Trust's combined operations.

- **Print and Electronic Publications:** Frank Lloyd Wright Trust website, www.flwright.org, has one million visitors annually and will include a section on World Heritage, that will convey the Outstanding Universal Value of Unity Temple and the Robie House as World Heritage sites, and provide scholarly background information to an audience of architectural historians and other scholars, professional architects, and cultural tourists. Two magazines are produced annually, *Wright Angles,* published in both print and electronic versions, and the Trust's bi-monthly electronic newsletter. They are sent to 80,000 recipients, and will include World Heritage updates and information. A major book on Robie House will be published on completion of the restoration and will include World Heritage information. The Trust's annual reports will include World Heritage information about the Outstanding Universal Value of the sites.
- **Interpretive Material for Staff, Board, Docents, and Trust Members:** World Heritage information will be provided by trained interpreters for public tours and the recorded tours (eight languages) at all five Trust sites reaching a combined total of 150,000 visitors each year. Teacher and in-school print and electronic materials and mobile technology apps will include information about World Heritage that can be interpreted to various grade and age levels and integrated into the school curriculum. DVDs and mobile technology apps for Unity Temple and Robie House will include information about the Outstanding Universal Value of these sites. An interactive computer learning center at Robie House will feature comprehensive World Heritage information. "Travel Wright," the Trust's longstanding travel program, which organizes international and domestic guided trips, will include World Heritage information in its promotional materials and in its "Architectural Notes for Travelers." The Trust's Restoration Resource Center and Archives will provide information about World Heritage and worldwide preservation standards and programs as well as detailed information about the preservation efforts at Robie House and Unity Temple. In addition, the Trust's 2,000 members representing thirty countries around the world, twenty-five business/corporate partner members, sixty-five staff members and fifteen board members will have the ability to receive in-depth information about World Heritage through internal training sessions and retreats. The Trust's 650 volunteers will receive updated World Heritage information in their monthly newsletters, training materials, and fact sheets. Volunteer training sessions at Unity Temple and Robie House (fifteen per year) and Frank Lloyd Wright seminars (six per year) for volunteers will include World Heritage information.
- **Annual/Special Events:** The Trust's Wright Plus House Walk, which has an annual attendance of over 3,200 visitors from around the world, will incorporate information about World Heritage into promotional materials and information will be conveyed by trained interpreters on the day of the Walk, which includes Unity Temple, Robie House and other Wright sites in the Chicago area. Promotional materials for "Thinking into the Future: The Robie House Series on Architecture, Design and Ideas," an annual lecture featuring a major international speaker, will include information about the World Heritage status of the Chicago area sites. "The Frank Lloyd Wright Enrichment Series" at Unity Temple includes special lectures on Wright and American Culture, adult workshops, interpretive and performance series, and camps for children, currently numbering twenty public programs annually. These will also include World Heritage information.
- **Other:** The Trust's Information and Marketing Department will include World Heritage information in Chicago area media outlets and cultural marketplace, Illinois tourism channels, national and international architectural and tourism media, including developed articles, ads, multi-channel marketing, press releases, and social media exchanges. The Trust currently has 17,000 Facebook fans.

TALIESIN

- **Print and Electronic Publications:** The website, www.taliesinpreservation.org, attracts an average of 225,000 visitors annually and will feature World Heritage information that will convey the Outstanding Universal Value of Taliesin as a World Heritage site. This information will also be featured in site support materials that reach 40,000 recipients. Taliesin Preservation, Inc. utilizes social media to communicate with casual visitors as well as well-informed preservationists and serious students of architecture. The Facebook page has 3,400 followers and information is also disseminated through a Twitter account; both will feature World Heritage information when the property is inscribed.
- **Interpretive Materials for the Public, Staff, Board, Docents and Members:** In addition to signage at the site, the Docent Handbook and personal training sessions will incorporate World Heritage content. Additionally, an explanation of Taliesin's Outstanding Universal Value and the significance of its inclusion on the World Heritage List will be provided all staff and members of the Taliesin Preservation, Inc. board.

- **Annual/Special Events:** World Heritage information will also be incorporated into the following special events: Taliesin's annual June celebration, a September donor reception, architecture camps throughout the summer for students ages ten through seventeen, photography and art workshops for adults, and new events that are in the planning stages designed to attract a broad spectrum of participants drawing from the regional population as well as a national audience.
- **Other:** TPI also publicizes the site and its importance through the Wisconsin State Historical Society, Wisconsin Department of Tourism, American Institute of Architects Wisconsin chapter, and the Wisconsin State Journal, and cooperates with the Frank Lloyd Wright Foundation in the promotion of visitation and understanding of the architecture at Taliesin and Taliesin West. The gift shop at Taliesin carries a wide range of publications on architecture in general and will consider carrying items related to the World Heritage program once inscription status is obtained.

HOLLYHOCK HOUSE

- **Print and Electronic Publications:** The web presence is primarily through www.Barnsdall.org, and the section regarding Hollyhock House will be updated with full World Heritage content. The city website offers another opportunity to expand coverage of the World Heritage designation at http://www.laparks.org/dos/historic/barsndall.htm. Barnsdall Art Park Foundation promotes Hollyhock House through social media. A social media coordinator oversees Facebook (approximately 10,000 friends) and Instagram. Several publications specific to Hollyhock House are in the planning stages and a special World Heritage section is contemplated to integrate World Heritage information into the larger content.
- **Interpretive Materials for the Public, Staff, Board, and Docents:** A new docent training manual is in preparation and will include content related to the Outstanding Universal Value of the site and the significance of inclusion in the World Heritage list. Press releases from the Office of the Mayor and the Office of Cultural Affairs will emphasize the designation.
- **Annual/Special Events:** Special events such as symposia, lectures at the Municipal Art Gallery adjacent to Hollyhock House, and public events in Barnsdall Park, including the popular summer wine tastings, will reference Hollyhock House as part of the World Heritage List program as appropriate.
- **Other:** The Los Angeles Convention and Visitors Bureau promotes tourism for the city to foreign journalists and is active in promoting Hollyhock House internationally. It will include information related to the World Heritage designation once inscription is attained.

FALLINGWATER

- **Print and Electronic Publications:** The World Heritage logo will be included in all brochures (50,000 distributed annually) promoting Fallingwater. Once inscription is achieved, the Fallingwater website, www.fallingwater.org, will include a section on World Heritage that will convey the Outstanding Universal Value of Fallingwater as a World Heritage site, links to the other Wright World Heritage sites, and provide information on the distinction as well as background information on the series and its significance. Currently, the website receives 5.2 million page views and 1.92 million visits annually with visit durations hovering around five minutes. The WPC produces three issues of *Conserve* magazine (readership 35,0000) annually in both print and electronic versions, and two issues annually of the "Friends of Fallingwater" newsletter (readership 9,250). Both will include World Heritage updates and information for the WPC's 10,513 members (representing all fifty states and twenty-six countries), and the Friends of Fallingwater's 1,239 members (from forty-six states and twelve countries). Additionally, information about World Heritage will be included in all teacher and in-school print materials so that the importance of the designation can be interpreted to various grade and age levels and integrated into the school curriculum.
- **Interpretive Material for the Public, Staff, Board, Docents, and Members:** All Fallingwater staff will be trained on the significance of the Worlds Heritage designation and World Heritage content will be incorporated into tours. In addition, WPC staff, volunteers, members of the Fallingwater Advisory Committee, and the WPC Board of Directors will receive in-depth information about World Heritage through internal training sessions, printed training material, fact sheets, and via SharePoint, our internal web application and framework platform.
- **Other:** The Fallingwater's marketing staff working with WPC's communications department will include World Heritage information to regional media outlets and tourism markets, as well as state, national, and international architectural and tourism media. All internally developed articles, press releases, and other marketing materials will include the World Heritage logo in recognition of Fallingwater's World Heritage designation. Finally, WPC will hold a celebration on-site with invited local, state and national dignitaries to mark the inscription. On-site signage will include prominently placed World Heritage Site signage.

HERBERT AND KATHERINE JACOBS HOUSE

- Print and Electronic Publications: All information provided to the public by this site is accessed through the website, www.usonia1.com. The Jacobs website will incorporate World Heritage information and will expand

upon the significance of inscription and the Outstanding Universal Value embodied in the house. The site will add a link to the UNESCO World Heritage website and to materials related to the other Frank Lloyd Wright included in the designation.

TALIESIN WEST

- **Print and Electronic Publications:** The Frank Lloyd Wright Foundation website, www.franklloydwright.org, has one million page views by 100,000 visitors annually and will include a section on World Heritage that will convey the Outstanding Universal Value of Taliesin West and links to the other Wright World Heritage sites. *The Frank Lloyd Wright Quarterly*, the member magazine, distributed quarterly to 10,000 readers will also be a vehicle to publicize and explain the World Heritage program and the inscription. "Frank Lloyd Wright Foundation News and Events" is a monthly email distribution to 35,000 Foundation constituents and it will carry news and content related to World Heritage. The Foundation also publishes "The Space Within," a monthly online newsletter to Foundation staff and volunteers (distributed to 450 people) will highlight the significance of the World Heritage status, as will the Taliesin West visitor guides, which are updated twice a year and provided to the over 100,000 visitors annually. In addition, the School of Architecture at Taliesin website, www.taliesin.edu, will incorporate Wright World Heritage materials. The Foundation conducts a number of programs for teachers and for primary and secondary students with related materials in both print and electronic format; these will include information about World Heritage available for integration into teaching plans. DVDs and mobile technology applications are in development and will highlight the World Heritage designation and its significance. Youth Summer Camps in architecture, drawing, ceramics, and photography will provide additional opportunities to draw attention to the World Heritage program, and explain why Taliesin West and other Wright sites are included.
- **Interpretive Material for the Public, Staff, Board, Docents, and Members:** Staff and volunteer docent training programs will include World Heritage content that will emphasize the Outstanding Universal Value of the site. The Taliesin West Tour Guide Handbook will be updated to include World Heritage information.
- **Annual/Special Events:** The American Institute of Architects regional historic preservation colloquium is held annually at Taliesin West and will be utilized to spread the word and discuss the Wright property inscription in addition to the "Architectural Lecture Series" held every spring.
- **Other:** The Foundation's communications department will incorporate World Heritage information in regional and national promotional materials and will work with the Phoenix and Scottsdale convention and tourism bureaus as well as the state tourism office to ensure that visitors to Phoenix and Arizona are aware of the opportunities to visit World Heritage sites in the state. Cross-marketing will be undertaken with the other component Wright sites elsewhere in the country.

SOLOMON R. GUGGENHEIM MUSEUM

- **Print and Electronic Publications:** Foundation website, www.guggenheim.org, has four million visitors annually and will include a section on World Heritage that will convey the Outstanding Universal Value of the Solomon R. Guggenheim Museum and links to the other World Heritage sites. The Director of the Solomon R. Guggenheim Museum and Foundation will announce the designation in communications to the museum's 12,500 members as well as through the Guggenheim's constellation of museums, which includes museums in Venice, Italy; Bilbao, Spain; and Abu Dhabi, United Arab Emirates. The World Heritage designation will be announced with a full media and public relations campaign reaching a broad range of media outlets worldwide. The Guggenheim's social media sites including Twitter.com/Guggenheim (one million followers), Facebook.com/GuggenheimMuseum (822,000 likes), and Instagram.com/Guggenheim (1.9 million followers) will feature the announcement of the designation and ongoing features on the Outstanding Universal Value of the Solomon R. Guggenheim Museum and the other Frank Lloyd Wright properties.
- **Interpretive Material for the Public, Staff, Board, Docents:** The Foundation will identify the museum as World Heritage property with a World Heritage logo, as appropriate, in publications, press releases, and signage located at the museum. Staff, volunteer, and intern training programs will include World Heritage content and will emphasize the Outstanding Universal Value of the site. All handbooks for staff, volunteers, and interns will be updated to include information on World Heritage. In addition, the architectural tour that is included on the mobile technology app that is available to all visitors to the Solomon R. Guggenheim Museum will be updated to include information about the designation and the Outstanding Universal Value of the museum.
- **Other:** The Foundation's Marketing Department will include World Heritage information to tourism markets as well as state, national and international architectural and tourism media.

5.j Staffing Levels and Expertise

UNITY TEMPLE

Unity Temple has a staff of two that include:

- **Executive Director** of Unity Temple Restoration Foundation (UTRF) is responsible for developing budgets and staffing recommendations, managing operating and capital budgets, managing external communications, managing relationships with UTRF's partners, and developing and implementing the capital fundraising campaign for the preservation of Unity Temple. Supervises the bookkeeper and collaborates with the Unity Temple Unitarian Universalist Congregation and Frank Lloyd Wright Trust.

  Qualifications: Relevant Master's degree preferred. Minimum of 10 to 15 years' relevant experience including successful senior leadership experience and success directing fundraising campaigns with goals in excess of US$10 million. Strong interest in architecture, architectural history, the work of Frank Lloyd Wright, and the UTRF mission. Superb organizational, communication, outreach, management, networking, and collaborative skills.

- **Bookkeeper** of UTRF is responsible for review and payment of day-to-day bills and other payables. Maintains monthly financials and works with auditors to ensure timely preparation of audit.

  Qualifications: Relevant Bachelor's degree preferred.

Additional staff support is provided by the Frank Lloyd Wright Trust, which operates the Frederick C. Robie House site (see below). The Trust provides assistance to Unity Temple for ticketing and tours, marketing, and public programming.

FREDERICK C. ROBIE HOUSE

The Frank Lloyd Wright Trust has a staff of 65. Key positions include:

- **President and CEO** is responsible for the strategic direction of the Trust and successful execution of all organizational policies and programs. Oversees departments and provides leadership and direction to staff. Cultivates relationships with major stakeholders for the purposes of fundraising, including major gifts.

  Qualifications: Master's degree preferred, bachelor's degree in Art History or related filed. At least ten years experienced in senior level museum management is required with an emphasis in historic preservation and/or collections. Must possess excellent leadership and communication skills.

- **Director of Finance** manages Trust functions for the receipt, disbursement and protection of cash, preservation of assets and investment of funds. Responsible for recording, reporting, controlling and analyzing the finances and taxes of the Trust. Trains and supervises finance department staff. Ensures maintenance of accounting procedures and reporting practices in accordance with generally accepted accounting principles for nonprofit organizations.

  Qualifications: A Bachelor's degree in accounting is required; CPA or equivalent desirable; minimum five years prior relevant experience; prior experience with fund accounting, nonprofit museum management, and retail financial management is desirable. Experience is required in the preparation of financial statements and tax returns, cost analysis, budgeting, grant preparation and reporting, and staff supervision. Must be proficient in the creation and use of computer spreadsheets, modeling and report writing, and possess excellent communication skills.

- **Director of Operations and Guest Experience** is part of the senior management team that drives the overall strategy for the organization. Is responsible for the oversight and strategic direction for operations as they integrate with the guest experience. Contributes to the development of earned and unearned revenue and program sustainability through audience trends and survey data analysis. Initiates Trust plans for audience development and cultural tourism. Supervises site managers and Volunteer Resources Manager.

  Qualifications: Master's degree preferred; BA or BS undergraduate degree plus five years of experience in all aspects of data analysis, program development and delivery, guest relations and comprehensive event management at a museum or cultural institution at a strategic level. Five years of experience in development and management of budgets and related financial oversight. Demonstrated success in providing visitor experiences of the highest quality. Excellent customer service, and communication and negotiation skills.

- **Preservation Architect and Facilities Administrator** supervises the preservation and facility management of the Frank Lloyd Wright Home and Studio and Frederick C. Robie House. Oversees the maintenance of the properties of the Trust. Implement and oversee preservation and restoration projects, including working drawings, research and construction supervision. Oversees construction, and coordinate trades on projects undertaken by the Trust. Oversees the documentation of all preservation and restoration projects.

Qualifications: Master's degree in Architecture or Historic Preservation and licensed to practice architecture in the State of Illinois. Five years of architectural experience, after required degree, minimum of three years' experience in preservation of historic properties. Auto CAD proficient. Strong communication skills.

- **Curator and Director Interpretation** oversees the Collections and Archives of the Frank Lloyd Wright Trust coordinating display and care of collections and oversees interpretation of historic sites for publications, videos, and web presentations. Coordinates research on the collections and sites to advance knowledge and scholarship about Frank Lloyd Wright. Oversees education department.

  Qualifications: M.A. degree in Architectural History or Art History, with a specialization in American Architecture and/or Decorative Arts and Design of the late nineteenth and early twentieth centuries. Excellent communication skills. Knowledge of audio-visual technologies. Knowledge of collections and archives management and procedures. Five years' experience in a related position. Supervisory experience.

TALIESIN

Taliesin Preservation, Inc., has a staff of 20 year-around employees and an additional 60 summer employees at the site. Key positions include:

- **Executive Director and Director of Operations** is responsible for the overall direction of the estate operations including preservation and maintenance of the building, program planning, and financial management, including budgeting, membership and fundraising. Supervises the Estate Manager, Operations Manager, Education Coordinator, and Business and HR manager, and Historian.

  Qualifications: Master's degree preferred, bachelor's degree in Art History, Architectural History, or related field plus relevant experience required. At least five years successful experience in senior level museum management is required, with an emphasis in historic preservation and/or collections.

- **Estate Manager** oversees the preservation and maintenance program, the care and management of its collections and cultural landscape. Supervises Crew manager, Project Manager, Preservation Architectural Technician, Maintenance Manager, and Cultural Landscape Manager.

  Qualifications: Master's degree in Historic Preservation, Construction Management or related field preferred, five to ten years of experience managing historic properties and/or construction teams.

- **Operations Manager** is responsible for the public tour program, interpretive staff training and public education programs. Supervises a staff that includes Education Program Coordinator, and a staff of 60 full and part-time tour guides, drivers, docents, retail staff. Oversees admissions, visitor center services, reservations, and visitor transportation. Directly supervises van drivers, reservation staff and the event program staff.

  Qualifications: A minimum of an undergraduate degree in art education, museum education, architecture education, or art history is required—Master's degree in education preferred and at least five years of teaching or equivalent museum education experience.

Additional staffing to ensure the good management of the site includes: accounting and human relations. The Frank Lloyd Wright Foundation, site owner, staffs the following: Collections Manager, Maintenance Manager, and Cultural Landscape Manager.

HOLLYHOCK HOUSE

Hollyhock House has a staff of four full time and 10 half time positions.

Full Time Positions:

- **Curator of Hollyhock House** is responsible for the museum's operations including preservation and maintenance of the building, care and management of its collections and program planning.

  Qualifications: Master's degree preferred, bachelor's degree in Art History, Architectural History, or related field plus relevant experience required. At least five years successful experience in senior level museum management is required, with an emphasis in historic preservation and/or collections.

- **Arts Manager** reports to the curator and manages the daily operations.

  Qualifications: A bachelor's degree and/or experience in museum operations.

- **Visitor Services Manager** oversees the museum touring program and manages volunteer docents.

  Qualifications: A bachelor's degree and/or experience in cultural tourism and/or visitor services.

- **Administrative Clerk** manages reports, on-line ticket sales and general administration.

  Qualifications: A bachelor's degree and general computer skills.

Part Time Positions:

- **Research Assistant** conducts investigation for restoration and interpretation projects.

Qualifications: A bachelor's degree and research skills.

- **Conservator** manages the conservation and preservation of the concrete elements of Hollyhock House including the ornamental art stone.

  Qualifications: Documented three to five years of concrete conservation and preservation experience.

- **Gallery Attendants** are responsible for implementing the public tour program, scheduling volunteer docent tour guides and other duties as assigned.

  Qualifications: A minimum of an undergraduate degree and relevant experience.

Related Support Services:

- **General Services Department/City of Los Angeles** provides specialized housekeeping services and maintenance as required and provides security services.
- **Department of Recreation and Parks** maintains Barnsdall Park landscape.

Additional support is provided by Barnsdall Art Park Foundation including programing, public relations services and specialized landscape maintenance.

FALLINGWATER

Fallingwater has a staff of 138 at the site. Key positions include:

- **Vice President and Director** of Fallingwater is responsible for the overall strategic direction of the museum's operations including preservation and maintenance of the buildings and surrounding landscape, care and management of its collections, interpretation and educational programming, and financial management, including budgeting, membership, fundraising, and income generation. Supervises the Director of Preservation and Collections, Director of Operations, Curator of Education, and several other senior positions.

  Qualifications: Master's degree preferred, bachelor's degree in Art History, Architectural History, or related field plus relevant experience required. At least five years successful experience in senior level museum management is required, with an emphasis in historic preservation and/or collections.

- **Director of Preservation and Collections** oversees the museum's preservation program, the care and management of its collections, and the exhibition program and cultural landscape. Supervises preservation maintenance technician, museum registrar, and housekeeping team.

  Qualifications: Master's degree in Architectural Studies, Historic Preservation, Museum Studies or related field and three to five years museum curatorial experience.

- **Director of Operations** oversees the overall management of the museum's operations, including visitor services, maintenance, security, landscaping, project and program planning.

  Qualifications: Master's degree or comparable experience preferred. At least five years successful experience in museum management is required, with an emphasis in museum operations; or comparable management experience that may substitute.

- **Curator of Education** is responsible for the public tour program, interpretive staff training and public education programs. Supervises a staff that includes Education Programs Coordinator, Public Tour Manager, and School Programs Coordinator along with a staff of 48 full and part-time tour guides.

  Qualifications: A minimum of an undergraduate degree in art education, museum education, architecture education, or art history is required—Master's degree in education preferred and at least five years of teaching or equivalent museum education experience.

- **Director of Maintenance** manages and coordinates maintenance of all properties and facilities at Fallingwater, directly through in-house maintenance staff or indirectly through outsourcing. This includes maintenance oversight of Fallingwater, maintenance of the historic landscape at Fallingwater and several other historic structures.

  Qualifications: Bachelor's degree in engineering, project management or other maintenance related field. Five to seven year's progressive managerial experience, preferably as a Director of Maintenance or Facilities or equivalent position. Experience with maintenance of a historical facility and/or property preferred.

- **Visitor Services Manager** is responsible for the business operations portion of the public tour program. Oversees admissions, pavilion visitor services, reservations, and visitor transportation. Directly supervises gate, pavilion, van drivers, reservation staff and the event program. Together with an Assistant Manager, supervises visitor services staff of 18 full and part-time staff.

  Qualifications: Business degree or equivalent experience is required. Hospitality or travel industry operational experience is preferred. Prior operational experience or experience as an Interpretive Team Leader or combination of experience and education is required.

- **Land Steward** undertakes monitoring, management, and other stewardship activities on conservation easements, fee lands, and other interests in land at Fallingwater.

Qualifications: Bachelor's degree and experience in natural resource management or related field, or equivalent experience is required; 2-3 year's land stewardship experience is preferred. Coursework in ecology and or experience with biological concepts is preferred.

Additional staffing to ensure the good management of the site includes: security, museum store management, café management, museum programs assistants, systems engineers, accounting and human relations.

HERBERT AND KATHERINE JACOBS HOUSE

The Herbert and Katherine Jacobs House is a privately owned and owner-occupied residence. The owner handles all aspects of site management at the site. The owner is professor emeritus of art history at a major public university and well-versed in architecture preservation matters with access to a network of architecture and conservation professionals. A knowledgeable professional with 37 years of experience in the architecture and engineering professions who manages another Wright building in the region provides additional assistance when needed regarding house access for maintenance, repairs and visits in the absence of the owner. This person also serves on the board of the Frank Lloyd Wright Wisconsin organization, an advocacy group for the preservation of the public Wright sites in Wisconsin.

TALIESIN WEST

The Frank Lloyd Wright Foundation has a staff of 110 between Taliesin West and Taliesin. Key positions include:

- **Chief Executive Officer** will provide strategic leadership to the Foundation as it continues its varied work to preserve Wright's legacy, and will actively lead the cultivation of private sector fundraising (major gifts), and will be expected to expand both earned and contributed revenues.

  Qualifications: Bachelor's degree in one's chosen field of study and ten years' leadership/management experience; strong operational and financial management skills; strong fundraising skills and experience with major donors; proven collaborative leadership style and the ability to work well with managers, employees, residents, students, alumni and the public; ability to manage in a multi-dimensional organization; ability to travel extensively; and have a demonstrated appreciation for and understanding of art, architecture, and design.

- **Vice President of Development and Communications** is charged with choreographing the simultaneous launch of new fundraising and communication programs; is responsible for strategic planning, leadership, fundraising cultivation and solicitation of donors, and direction and supervision of all communications designed to enhance the mission and vision of the Foundation; and plans, organizes, and executes programs designed to provide income from scheduled and repeatable annual fundraising efforts as well as unique capital intensive program and projects and ultimately to build an endowment—the income from which will provide ongoing support for building maintenance.

  Qualifications: Is a recognized, accomplished professional fundraising manager who has a demonstrated record, a history of professional responsibility and a commitment to the concept of historic, artistic preservation.

- **Vice President of Finance/COO** oversees and manages the day-to-day operations of the Frank Lloyd Wright Foundation in Scottsdale, Arizona and Spring Green, Wisconsin; provides leadership and management to ensure that the organization has the operational controls, administrative and reporting procedures and systems in place; reports to the CEO and works closely with department managers, the School of Architecture at Taliesin and Taliesin Preservation, Inc. (TPI) to ensure strong communication and collaboration; is responsible for fiscal management of the Foundation; oversees the preparation of the financial statements, state and federal tax filings and other corporation documents; compilation of the annual budget; organization and management of restricted funds and investments under the policy established by the Board of Trustees; and oversight the annual financial audit; and provides staff support for the Finance Committee of the Board of Trustees.

  Qualifications: Bachelor's degree in Business or related field and ten (10) years' leadership/management experience; strong operational and financial management skills, and proven collaborative leadership style and the ability to work well with managers, employees, residents, students, alumni and the public.

- **Director of Communications** works closely with the President and other senior management to sculpt the Frank Lloyd Wright Foundation's values-based message (organizational voice), and ensures its consistency and relevancy in all outreach and media; develops comprehensive and creative public relations strategies; and coordinating exceptional data management and cross-department cooperation to accomplish the challenging national outreach goals of the Foundation.

  Qualifications: Bachelor's degree in communications, public relations, marketing, journalism, design, or a closely related field from an accredited four-year college or university and a minimum of five years' related experience and/or training; s/he will possess outstanding writing, editing, research, and

speaking skills, have expert proficiency in social media, and have the ability to lead, prioritize, and work independently and in a collaborative, cross-functional team environment.

- **Director of Finance** is responsible for direct fiscal management of the Foundation, prepares monthly, quarterly and annual financial statements, state and federal tax filings and other corporate documents; compiles the annual budget; organizes and manages restricted funds and investments under the policy established by the Board of Trustees; and oversees the annual financial audit.

  Qualifications: Bachelor's degree in Accounting or related degree plus 10 years of accounting experience; at least five years' relevant experience in the accounting field as well as nonprofit accounting experience including compiling and/or auditing nonprofit financial statements.

- **Director of Information Systems** performs administrative and technical duties associated with directing and managing all aspects of Information Technology at the Foundation's National Historic Landmark properties in Scottsdale, Arizona, and Spring Green, Wisconsin, and supports the I.T. needs at both sites of the Foundation's cultural and educational nonprofit activities, the School of Architecture at Taliesin faculty, students, and staff, and the residential community of scholars and artists, including members of the original Taliesin Fellowship.

  Qualifications: Bachelor's degree (B.S.) in related field; three to five years' experience in the field of network administration; and experience in troubleshooting and staging of PC hardware, software and related equipment.

- **Director of Licensing** oversees all Foundation and School of Architecture licensing agreements for commercial and noncommercial use, and maintains and expands the Licensee and Historic Site programs to generate royalty income; supports CEO and COO with regard to contract negotiation and partners with external legal counsel, Paralegal, and licensing staff in protecting the Foundation's intellectual property; and partners with Collections and Exhibitions staff and museum partners in decisions regarding archival/collections or materials.

  Qualifications: Bachelor's degree in relevant field from an accredited college or university or equivalent experience; five years' related experience; and familiarity with the architecture and designs of Frank Lloyd Wright and mission of the Frank Lloyd Wright Foundation and the School of Architecture at Taliesin.

- **Vice President of Preservation** manages 198.087ha of property (land and buildings) for the Frank Lloyd Wright Foundation in Scottsdale, AZ; works with Foundation staff and faculty to develop and manage a maintenance program and participate in the planning and implementation of preservation, restoration, and capital improvement projects throughout the site as deemed necessary; works with the COO/VP Finance to adhere to maintenance and capital project scopes and assure timely project completion and stay within operating and capital budgets; and because portions of Taliesin West are on the National Historic Register, this position must be cognizant of the historical integrity of the buildings as well as building codes, standards, and methods and dedicated to the Foundation's mission.

  Qualifications: Bachelor's degree from an accredited college or university in architecture, engineering, or facilities management; five-plus years of facilities management experience including knowledge of construction standards, methods, materials, equipment, and tools for operations, usage, and safety implementation; or an equivalent combination of education and experience; a working knowledge of pricing and costing, finance, budgeting, and projections for purchasing and maintaining facilities and equipment; and OSHA construction training/proven knowledge and experience.

- **Facilities Manager** is responsible for implementing preservation and maintenance plans for the buildings and grounds at the 198.087ha Taliesin West campus in Scottsdale, AZ, including, but not limited to, staff management, planning and operation of equipment, facilities, and maintenance routines.

  Qualifications: High school diploma or equivalent; seven years' experience in construction management and building trades, management and building maintenance experience, managing and monitoring budgets, and working on existing structures; OSHA construction training/proven knowledge and experience, and strong interpersonal and communication skills and ability to foster a cooperative environment with staff, faculty, students, the Taliesin Fellowship, contractors, vendors, and the general public.

- **Group Tour and Sales Manager** is primarily responsible for driving group tour attendance at Taliesin West through inbound and outbound sales, and is responsible for all print, radio, or other advertising for our year-round tour program.

  Qualifications: Bachelor's degree in marketing or a related field from an accredited college or university; at least five years' relevant work experience, or a combination of education and experience that demonstrates the ability to perform the essential functions of the position; and a working knowledge of general marketing principles and techniques, group sales, and events planning.

- **Accounting Manager** performs a wide variety of advanced professional accounting and financial work.

Qualifications: A bachelor's degree in accounting and a minimum of two years' progressively responsible professional accounting experience, preferably in a non-profit setting; a working knowledge of all Microsoft Office products; and experience working with a computerized financial system.

- **Annual Giving Manager** supervises the annual giving, membership, and event activities of the Development Department.

  Qualifications: Bachelor's degree in communications or nonprofit administration preferred, two years of professional experience in nonprofit fundraising including soliciting individual, foundation and corporate contributions primarily through the proposal process and direct response mechanisms.

SOLOMON R. GUGGENHEIM MUSEUM

The Solomon R. Guggenheim Museum has a staff of 306 who support activities at the site. Key positions include:

- **Deputy Director and Chief Operating Officer** is responsible for the overall direction of the museum's operations including preservation and maintenance of the building, care and management of its collections, program planning, and financial management, including budgeting. Supervises Chief Financial Officer, Director of Visitor Experience, Associate Director of Security, Director of Retail Strategy and Operations, Director of Facilities, and several other positions.

  Qualifications: Master's degree in business administration preferred plus relevant experience required. At least five years successful experience in senior level museum management is required.

- **Deputy Director and Gail Engelberg Director of Education** is responsible for overseeing the public tour program, interpretive staff training and public education programs. Supervises a staff that includes Director of School and Family Programs, Director of Public Programs, along with a team of 23 full-time and part-time staff members.

  Qualifications: A minimum of an undergraduate degree in art education, museum education, or art history is required—Master's degree in education preferred and at least five years of teaching or equivalent museum education experience.

- **Chief Financial Officer** is the senior financial position within the institution. S/he is responsible for the long-term financial plan of the Foundation; management of the accounting, budget, compliance, internal audit, and payroll functions; and bank relationships, along with a team of 11 full-time staff members.

  Qualifications: Minimum of ten to fifteen years of experience in financial and accounting management. CPA and/or an advanced degree preferred.

- **Director, Visitor Experience** is responsible for the overall business operations of both visitor services and admissions. Oversees admissions and visitor services. Together with a Manager, supervises visitor experience staff of 16 full-time staff.

  Qualifications: Undergraduate degree and at least five years successful experience in senior level management in museum, hospitality or travel industry is required.

- **Director Retail Strategy and Operations** is responsible for the business operations of our retail store. Together with a Manager, supervises a retail team of 23 full-time and part-time staff members.

  Qualifications: Undergraduate degree and at least five years successful experience in senior level management in museum, retail, hospitality or travel industry is required.

- **Director of Facilities** manages and coordinates maintenance of the museum directly through in-house maintenance staff or indirectly through outsourcing. Oversees the implementation of the museum's preservation program.

  Qualifications: Bachelor's degree in engineering, project management or other maintenance related field. Five to seven year's progressive managerial experience. Experience with maintenance of a historical facility and/or site preferred.

- **Assistant Director of Security** is currently responsible for the security needs of the Frank Lloyd Wright building on Fifth Avenue, as well as for the other Guggenheim's New York City locations. This position directly oversees a full complement of security supervisors who, in turn train, manage and schedule a large in-house security force of 66 full-time and part-time members.

  Qualifications: Bachelor's degree preferred. Ten years supervisory experience in a public security operation.

- **Director of Human Resources** is responsible for all oversight on HR activities, including; talent management, compensation analysis, annual performance appraisal process, benefit and retirement plan communication and administration, employee relations, along with a team of 4 full-time and part-time staff members.

  Qualifications: Master's degree preferred. Eight to ten years senior HR generalist required.

Additional staffing to ensure the good management of the site includes: security, restaurant and café management, museum programs assistants, systems engineers, finance and human relations.

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"If America in the twentieth century is no longer architecturally in debt to Europe, the credit is predominantly due to one man and to one man alone, Frank Lloyd Wright."

Henry-Russell Hitchcock, In the Nature of Materials, 1887-1941: The Buildings of Frank Lloyd Wright (1942)

SECTION 6

MONITORING

6: MONITORING

6.a Key Indicators for Measuring State of Conservation

All key indicators are essential attributes that convey Outstanding Universal Value.

Unity Temple

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Deflection of Roof Eaves	Annually and as reported.	Director of Administration, Unity Temple Unitarian Universalist Congregation (UTUUC) files on UTUUC server S Drive; Executive Director, Unity Temple Restoration Foundation (UTRF) files on UTRF Server.
Building: Number and size of cracks in structure	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.
Building: Instances and size of cracks, spalling and delamination in shotcrete	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.
Building: Number and severity of leaks	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.
Woodwork: Fading and degradation of finishes	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.
Art Glass: Number of cracks in glass and degradation in structural stability of came	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.
Light Fixtures: Degradation of wood structure and glass	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Director of Administration (UTUUC) files on UTUUC server S Drive; Executive Director (UTRF) files on UTRF Server.

Frederick C. Robie House

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Deflection of Structural Elements	Biannual and as reported.	Administrative Offices
Building: Number and severity of leaks	Annually and as reported.	Administrative Offices
Art Glass Windows: Number of cracks and condition of sashes and frames.	Annually and as reported.	Administrative Offices
Woodwork: Fading and degradation of finishes	Annually and as reported.	Administrative Offices
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Administrative Offices

Taliesin

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Deflection of Structural Elements	Biannually and as reported.	Preservation Office, Taliesin
Building: Deterioration of Building Exterior Wood and Plaster	Annually and as reported.	Preservation Office, Taliesin
Building: Deterioration of Masonry Walls and Piers	Annually and as reported.	Preservation Office, Taliesin
Furniture: Monitoring of Furniture, Collections, and Furnishings	Biannually and as reported.	Preservation Office, Taliesin
Woodwork: Assess and Monitor Interior Finishes for natural deterioration and visitation use	Annually and as reported.	Preservation Office, Taliesin
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Preservation Office, Taliesin

Hollyhock House

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Cast concrete art stone ornamentation—rate of erosion and number of cracks.	Annually and as reported.	Curator's files/Hollyhock House hard drive with addenda to historic structure report.
Building: Number and size of structural cracks.	Annually and as reported.	Curator's files/Hollyhock House hard drive and appropriate notes appended to historic structure report.
Building: Number and severity of leaks.	Annually and as reported.	Curator's files/Hollyhock House hard drive with interventions appended to historic structure report.
Woodwork: UV radiation, mechanical, structural and climatologic damage.	Annually and as reported.	Curator's files/Hollyhock House hard drive. Updated to historic structure report.
Furniture: UV radiation, pollution, mechanical, and structural damage.	Bi-annually and as reported.	Curator's files/Hollyhock House hard drive. Updated in historic structure report.
Art Glass Windows: Number of cracks and condition of sashes and frames.	Annually and as reported.	Curator's files/Hollyhock House hard drive. Updated window inventory/condition report.
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Curator's files/Hollyhock House hard drive. Updated window inventory/condition report.

Fallingwater

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Deflection of the cantilevers	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive
Building: Number and size of any structural cracks	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive
Building: Number and severity of leaks	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive
Furniture/ Woodwork: Fading and degradation of finishes	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive
Furniture/ Woodwork: Structural failure including delamination of wood veneer	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive
Landscape: Number of hemlocks showing Woolly Adelgid infestation	Semiannually and as reported.	Horticultural specialist with copies on Fallingwater's computer server T drive
Landscape: Number of rhododendron locations showing evidence of fungus (Phomopsis and Botryosphaeria) disease	Annually and as reported.	Horticultural specialist with copies on Fallingwater's computer server T drive
Landscape: Number of ash tree locations showing evidence of emerald ash borer infestation	Annually and as reported.	Horticultural specialist's files with copies on Fallingwater's computer server T drive
Landscape: Shoreline of Bear Run monitored for erosion and hazardous debris	Annually and as reported.	Director of Operation's files with copies on Fallingwater's computer server T drive
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive
Finishes: Bio growth prevention and abatement through application of D/2 biological solution	Annually and as reported.	Curator's files with copies on Fallingwater's computer server T drive

Herbert and Katherine Jacobs House

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Deflection of the carport cantilever	Annually and as reported.	Owner's files and copies with maintenance staff
Building: Deflection of the southwest cantilever over living room	Annually and as reported.	Owner's files and copies with maintenance staff
Building: Number and size of cracks in brick piers	Annually and as reported.	Owner's files and copies with maintenance staff
Building: Number and size of cracks in interior concrete slab	Annually and as reported.	Owner's files and copies with maintenance staff
Building: Number and size of cracks in exterior concrete slab	Annually and as reported.	Owner's files and copies with maintenance staff
Building: surface of interior slab (painted and waxed)	Annually and as reported.	Owner's files and copies with maintenance staff
Building: surface of exterior slab (stained)	Annually and as reported.	Owner's files and copies with maintenance staff
Building: Number and severity of leaks	Annually and as reported.	Owner's files and copies with maintenance staff
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Owner's files and copies with maintenance staff

Taliesin West

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Degradation of Desert Masonry	Annually and as reported.	Preservation Office, Taliesin West
Building: Structural cracks in Desert Masonry	Annually and as reported.	Preservation Office, Taliesin West
Building: Degradation of exterior wood elements	Annually and as reported.	Preservation Office, Taliesin West
Building: Frequency and severity of water infiltration (site run off and roofing failures)	Annually and as reported.	Preservation Office, Taliesin West
Furniture and woodwork: Fading and degradation of finishes	Annually and as reported.	Preservation Office, Taliesin West
Infrastructure: Frequency of domestic water leaks	Annually and as reported.	Preservation Office, Taliesin West
Infrastructure: Frequency of waste water line failure	Annually and as reported.	Preservation Office, Taliesin West
Infrastructure: Degradation of electrical wiring casing	Annually and as reported.	Preservation Office, Taliesin West
Landscape: Desert Mistletoe (Phoradendron Californicum) infestation	Annually and as reported.	Preservation Office, Taliesin West
Landscape: Invasive species Saltcedars (Tamarix Chinensis) removal	Annually and as reported.	Preservation Office, Taliesin West
Finishes: Interior and exterior finishes and colors maintained	Annually and as reported.	Preservation Office, Taliesin West

Solomon R. Guggenheim Museum

INDICATOR	PERIODICITY	LOCATION OF RECORDS
Building: Number and size of any structural cracks	Annually and as reported.	Facilities Department with copies on Guggenheim's S drive
Building: Number and severity of leaks	Daily and as reported.	Facilities Department with copies on Guggenheim's S drive
Building: Oxidation of exterior copper signage.	Annually and as reported.	Facilities Department with copies on Guggenheim's S drive.
Building: Evidence of effluorescence on exterior decorative copper frieze.	Annually and as reported.	Facilities Department with copies on Guggenheim's S drive.
Building: Number and severity of exterior surface cracks	Daily and as reported.	Facilities Department with copies on Guggenheim's S drive.
Building: Number and severity of interior cracks	Daily and as reported.	Facilities Department with copies on Guggenheim's S drive.
Building: Exhibition-related interventions	Following each exhibition and as required.	Facilities Department with copies on Guggenheim's S drive.
Finishes: Interior and exterior finishes and colors maintained	Annually and as required.	Facilities Department with copies on Guggenheim's S drive.

6.b Administrative Arrangements for Monitoring Property

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6.c Results of Previous Reporting Exercises

THE FRANK LLOYD WRIGHT World Heritage Council held its last annual reporting cycle in March 2018. The information collected by the Frank Lloyd Wright World Heritage Council will serve as the baseline of data for evaluating the component sites of this series. This will be based, in part, of the results of previous reporting exercises, which includes:

Unity Temple

Restoration Master Plan (2006) by Harboe Architects, including a comprehensive analysis of building and systems.

Interior Finishes Analysis by Building Conservation Inc., including recommendations for restoration of plasterwork.

Frederick C. Robie House

Restoration Work Plan (2002) by Harboe Architects, including identification of exterior restoration needs.

Taliesin

A Master Plan for the Restoration of Taliesin—Phase One: Slope Stabilization Study (2002) by John Eifler Associates. Hillside stabilized (2005).

Stabilization and Restoration Master Plan (2006 and 2008) by Isthmus Architecture Inc., including need for foundation work.

Hollyhock House

Historic Structure Report (1992) by Martin Weil et al. Structural stabilization and repairs of roof leaks following 2002 earthquake completed (2004).

Supplemental Historic Structure Report (2009) by LSA Associates et al., including recommendations for structural repairs.

Fallingwater

Structural Conditions Assessment (1996-98) by Robert Silman Associates, focusing on analysis of terraces.

Preservation Master Plan (1999) by Wash Adams Slavin Associates, including need for waterproofing.

Herbert and Katherine Jacobs House

No major updates reported by owners (2018).

Taliesin West

Building Conditions Assessment Study: Studio, Kiva Theater, and Mr. and Mrs. Wright's Living Quarters (1998 and 2001)

Taliesin West Preservation Master Plan (completion in Fall 2014) by Harboe Architects.

Solomon R. Guggenheim Museum

Structural Conditions Assessment (2005) by Robert Silman Associates, focusing on cracking of rotunda walls. Concrete walls stripped of paint, cracks repaired, stabilization of 6th floor (2008).

Solomon R. Guggenheim Museum Capital Project Plan 2013 - 2018

"There are many tendencies in the new architecture toward a more complete and clear mechanism than the human being itself. Never so with Frank Lloyd Wright. His works have always, without a single exception, the limitations of the human being. They are our friends, on an equal standing. There is always something which reminds us of the unknown depths of our own being."

Alvar Aalto

SECTION 7

DOCUMENTATION

7: DOCUMENTATION

7.a Photographs and Audiovisual Image Inventory and Authorization Form

File Name	Format	Caption	Date	Photographer	Copyright Owner	Contact Details of Copyright Owner	Nonexclusive Cession of Rights
FLW-01	jpeg	Unity Temple, view of west elevation.			Unity Temple Restoration Foundation	875 Lake Street, Oak Park, Illinois, 60301	Yes
FLW-02	jpeg	Unity Temple, View of auditorium/worship space looking north, taken from pulpit.			Unity Temple Restoration Foundation	875 Lake Street, Oak Park, Illinois, 60301	Yes
FLW-03	jpeg	Unity Temple, interior view showing eastern alcove of Unity House, and balcony above.			Unity Temple Restoration Foundation	875 Lake Street, Oak Park, Illinois, 60301	Yes
FLW-04	jpeg	Frederick C. Robie House, south elevation.			Frank Lloyd Wright Trust	209 South LaSalle Street, Suite 118, Chicago, Illinois, 60604	Yes
FLW-05	jpeg	Frederick C. Robie House, west elevation.			Frank Lloyd Wright Trust	209 South LaSalle Street, Suite 118, Chicago, Illinois, 60604	Yes
FLW-06	jpeg	Frederick C. Robie House, View of main floor facing east.			Harboe Architects	140 South Dearborn Street, Chicago, Illinois, 60603	Yes
FLW-07	jpeg	Taliesin, view looking southwest.		John Amarantides	Frank Lloyd Wright Foundation	P.O. Box 4430, Scottsdale, Arizona, 85261-4430	Yes
FLW-08	jpeg	Taliesin, view to the northeast across living room.			Taliesin Preservation, Inc.	5607 County Road C, Spring Green, Wisconsin, 53588	Yes
FLW-09	jpeg	Taliesin, Formal garden.		Bud Dietrich	Taliesin Preservation, Inc.	5607 County Road C, Spring Green, Wisconsin, 53588	Yes
FLW-10	jpeg	Hollyhock House, view of west elevation.	2014	Joshua White	Hollyhock House	4800 Hollywood Boulevard, Los Angeles, California 90027	Yes
FLW-11	jpeg	Hollyhock House, view from rooftop onto central courtyard.	2014	Joshua White	Hollyhock House	4800 Hollywood Boulevard, Los Angeles, California 90027	Yes
FLW-12	jpeg	Hollyhock House, view looking southeast in living room, with garden court (at left) beyond.		Larry Underhill	Hollyhock House	4800 Hollywood Boulevard, Los Angeles, California 90027	Yes
FLW-13	jpeg	Fallingwater, view from the southeast.	1993	Robert Buschak	Western Pennsylvania Conservancy	Fallingwater, P.O. Box R, Mill Run, Pennsylvania, 15464	Yes
FLW-14	jpeg	Fallingwater, view of entry (center) with trellis beams extending across drive.	2010	Christopher Little	Western Pennsylvania Conservancy	Fallingwater, P.O. Box R, Mill Run, Pennsylvania, 15465	Yes
FLW-15	jpeg	Fallingwater, main floor living area.	2010	Christopher Little	Western Pennsylvania Conservancy	Fallingwater, P.O. Box R, Mill Run, Pennsylvania, 15466	Yes
FLW-16	jpeg	Herbert and Katherine Jacobs House, east elevation.	2008	David Heald	James Dennis	441 Toepfer, Madison, Wisconsin 53711	Yes
FLW-17	jpeg	Herbert and Katherine Jacobs House, view facing northwest.	2008	David Heald	James Dennis	441 Toepfer, Madison, Wisconsin 53711	Yes
FLW-18	jpeg	Herbert and Katherine Jacobs House, view to the east of the dining alcove.	2008	David Heald	James Dennis	441 Toepfer, Madison, Wisconsin 53711	Yes
FLW-19	jpeg	Taliesin West, view looking north.	2012	Andrew Pielage	Frank Lloyd Wright Foundation	P.O. Box 4430, Scottsdale, Arizona, 85261	Yes
FLW-20	jpeg	Taliesin West, garden room.	1989	Scot Zimmerman	Scot Zimmerman	P.O. Box 289, Heber City, Utah, 84032	Yes
FLW-21	jpeg	Taliesin West, view looking northwest.	1989	Scot Zimmerman	Scot Zimmerman	P.O. Box 289, Heber City, Utah, 84032	Yes
FLW-22	jpeg	Solomon R. Guggenheim Museum, view looking eastward to Fifth Avenue with Central Park reservoir in foreground.		David Heald	Solomon R. Guggenheim Museum	1071 Fifth Avenue, New York, New York, 10128	Yes
FLW-23	jpeg	Solomon R. Guggenheim Museum, view of rotunda and skylight from ground floor.		David Heald	Solomon R. Guggenheim Museum	1071 Fifth Avenue, New York, New York, 10128	Yes
FLW-24	jpeg	Solomon R. Guggenheim Museum, view of rotunda with fountain in foreground.		David Heald	Solomon R. Guggenheim Museum	1071 Fifth Avenue, New York, New York, 10128	Yes

7.b Texts Relating to Protective Designation

A number of supplementary documents were provided in October and November 2015 following the evaluation mission for the initial nomination. These are marked with a ✱ in the list below.

APPENDIX	FORMAT	ITEM
A	MAP	**ORIGINAL MAPS** ■ Property Locator Map (United States) ■ Illinois Regional Locator Map (Unity Temple) ■ Component Locator Map (Unity Temple) ■ Illinois Regional Locator Map (Robie House) ■ Chicago, Illinois Locator Map (Robie House) ■ Component Locator Map (Robie House) ■ Wisconsin Regional Locator Map (Taliesin) ■ Component Locator Map (Taliesin) ■ California Regional Locator Map (Hollyhock House) ■ Los Angeles, California Locator Map (Hollyhock House) ■ Component Locator Map (Hollyhock House) ■ Pennsylvania Locator Map (Fallingwater) ■ Component Locator Map (Fallingwater) ■ Wisconsin Regional Locator Map (Jacobs House) ■ Component Locator Map (Jacobs House) ■ Arizona Regional Locator Map (Taliesin West) ■ Component Locator Map (Taliesin West) ■ New York Regional Locator Map (Guggenheim) ■ New York, New York Locator Map (Guggenheim) ■ Component Locator Map (Guggenheim)
B	TEXT	**FEDERAL LEGAL MEASURES** ■ Historic Sites, Buildings, Objects, and Antiquities Act of 1935, 16 United States C. 461-467 ■ National Historic Preservation Act (NHPA) of 1966, 16 United States C. 470 (excerpts) including Sections 106 and 110 ■ National Environmental Policy Act (NEPA) of 1969, 42 United States C. 4321 et seq. ■ Department of Transportation (DOT) Act of 1966, 49 United States C. 303
C	TEXT	**STATE AND LOCAL MEASURES** ■ Village of Oak Park, Illinois, Village Code 7-9-4B designating the Ridgeland-Oak Park Historic District (Unity Temple) ■ Village of Oak Park, Illinois, Village Code 7-9-8F4 designating Unity Temple an Oak Park Historic Landmark and Interior Landmark 1996 ■ Village of Oak Park, Historic Preservation Ordinance, Chapter 7, Article 9 (Unity Temple) ■ Village of Oak Park Strategic Historic Preservation Plan, 2010

- Envision Oak Park (Village Comprehensive Plan, 2014)
- Designation of Frederick C. Robie House as a Chicago Landmark by the Commission on Chicago Landmarks 1971
- Planned Development Area (No. 43), as defined by the City of Chicago's Municipal Zoning Ordinance, (Robie House)
- City of Chicago Landmarks Ordinance, excerpts Section 2-120-740 and Article IIIG Rules and Regulations (Robie House)
- Wisconsin Act 31, titled Chapter 31 (Taliesin)
- Designation of Hollyhock House as a Los Angeles Historic-Cultural Monument, January, 1963
- Chapter 9 of the Los Angeles City Code. Department of City Planning, Article 1. Section 22.171.11 titled Preservation of Monuments (Hollyhock House)
- Section 91.8119 of the Code of the City of Los Angeles, Historical Buildings and Structures as amended by ordinance No. 179,324 effective December 10, 2007 (Hollyhock House)
- Los Angeles City Charter, Sec. 594 - Control and Management of Recreation and Park Lands - subsection (c) (Hollyhock House)
- California Environmental Quality Act (CEQA) Excerpts (Hollyhock House and Marin County Civic Center)
- Declaration of Covenants between the Pennsylvania Historical and Museum Commission (PHMC), an agency of the State of Pennsylvania, and Western Pennsylvania Conservancy signed May 31, 2000 (Fallingwater)
- Wisconsin State Statutes section 893.33 (Jacobs House)
- City of Madison Landmark designation of Jacobs House, May 1974 documentation
- City of Madison Landmarks Commission ordinance Section 33.19 (Jacobs House)
- City of Madison General Ordinances Chapter 28 – Zoning Code (Jacobs House; 6 documents)
- City of Scottsdale Zoning Ordinance 3667 designating Taliesin West a Historic Property
- New York City Preservation Commission, designation Solomon R. Guggenheim Museum an Individual Landmark and as an Interior Landmark August 14, 1990
- Expanded Carnegie Hill Historic District, December, 1983 (excerpts) (Guggenheim)
- New York City Landmarks Preservation Commission Rules, Title 63, January 2013 (excerpts) (Guggenheim)

D TEXT AND DRAWINGS MANAGEMENT PLANS AND RELATED DOCUMENTS

- Frank Lloyd Wright World Heritage Council Communication Plan and Memorandum of Agreement, January 2012 and Appendix, July 2014,
- Unity Temple: Restoration Master Plan, October 2006
- Unity Temple Operating- Agreement, April 2015
- Unity Temple Use and Restoration Agreement, April 2015
- Robie House: Restoration Work Plan, November 2012
- Robie House: Program Plan, 2012
- * Robie House Maintenance Manual, updated July 2015
- * The University of Chicago Woodlawn Avenue Plan Sub-Area O, 2012 – 2016 (Robie House)
- Taliesin: Taliesin Stabilization and Restoration Master Plan (excerpts), 2008
- * Taliesin: Taliesin Preservation Policy, updated May 23, 2013
- * Taliesin Fire Plan, September 2011, updated December 2014
- * Taliesin Historic Landscape Report, 1999
- Taliesin Strategic Landscape Plan, 1998
- Taliesin TPI FLLW Foundation 2014 MOU
- Taliesin Collection Disaster Plan, December 2015
- Taliesin Fire Policy, October 2015
- Taliesin Safety Maps, July 2016
- Taliesin Special Event Policy, June 2017

- Taliesin 3-year Plan (2017-2019)
- Hollyhock House: Barnsdall Park Master Plan, November 1995
- Operating Agreement Barnsdall Park Cultural Facilities, 1980
- Hollyhock House: Historic Structure Report, 1992
- Hollyhock Supplemental Historic Structure Report, October 2009
- Hollyhock House: Docent Training Manual 2018
- Fallingwater: Strategic Plan, 2008
- * Fallingwater Landscape Master Plan, 2002
- * Fallingwater Collections Guidelines, 2005*Fallingwater Viewshed
- Fallingwater 3-year strategic plan, 2018-2020
- Fallingwater Action Plan – Operational Goals 2018
- * Interpretation – Management Plan for the Fallingwater Landscape, 1997
- * Jacobs House Management Plan, October 2015
- Taliesin West: Preservation Philosophy and Approach (excerpts), September 2014
- Taliesin West: 2014 Preservation Department Goals (excerpts from Operational Plan), 2014
- * Taliesin West Preservation Master Plan, October 2015
- Taliesin West Preservation Priorities 3-year plan, August 2017
- Guggenheim Museum: Capital Project Plan, 2013-2018

E TEXT CONSERVATION EASEMENTS AND RELATED DOCUMENTS

- Conservation Right governing Unity Temple January 1987 (Unity Temple)
- Historic Preservation Covenant between the Frank Lloyd Wright Foundation and the State Historical Society of Wisconsin, an agency of the State of Wisconsin August 2005 (Taliesin)
- Agreement between Frank Lloyd Wright Foundation, Taliesin Preservation, Inc. and the Wisconsin Housing and Economic Development Authority (WHEDA) 1993 (Taliesin)
- Deed October 1963 conveying Fallingwater to the Western Pennsylvania Conservancy
- Trust Agreement for Fallingwater October 1963
- Covenant dated March 23, 2010 between James Munn Dennis and the State Historical Society of Wisconsin recorded December 17, 2010 with the Dane County Register of Deeds as Document No. 4727337 (Jacobs House)
- Historical Preservation Easement between The Frank Lloyd Wright Foundation and the Arizona State Historic Preservation Officer and the Arizona State Parks Board recorded in the Official Records of Maricopa County, Arizona on November 14, 2006 as Document No. 2006-1494115 (Taliesin West)

F PHOTOGRAPHS PHOTOGRAPH IMAGE INVENTORY

7.c Form and Date of Most Recent Records or Inventory of Property

ALL SITES IN the series perform a routine inventory of museum property and perform an ongoing inspection of structures and real property with the exception of the Herbert and Katherine Jacobs House where an inventory of personal property is performed less frequently. Financial records and administrative documents such as annual reports, meeting minutes, and correspondence are produced and stored by each site individually. Recordkeeping style varies by site, where they may be stored digitally on a museum-grade database, assembled as part of a professional appraisal, or as a series of photographs. Copies of records are stored and maintained at each site location with select documents (such as local, state, and federal legal documents; management plans and structural documentation; and conservation easements) also retained by the Frank Lloyd Wright Building Conservancy.

The Frank Lloyd Wright Building Conservancy also maintains records of the Frank Lloyd Wright World Heritage Council meetings and minutes as well as correspondence between it and the individual sites, the National Park Service, and ICOMOS.

7.d Address Where Inventory, Records and Archives are Held

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7.e Bibliography

General

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"Frank Lloyd Wright made houses right up to the end. I think that's important because it gives you a direct connection to all the basic aspects of architecture—the spatial energy of the place, the construction, the materials, the site, the detail."

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8.e Acknowledgements

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"Wright says that the architecture of the future—he sees it naturally from the viewpoint of his own work—is for the first time in history wholly architecture, space in itself, without any prescribed model, without embellishments—movement, in three and four dimensions."

Erich Mendelsohn, in letter dated 05 November 1924

SECTION 9

SIGNATURES

9: Signature on Behalf of the State Party

Assistant Secretary for Fish and Wildlife and Parks

Unites States Department of the Interior

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Unity Temple

Frederick C. Robie House

Taliesin

Hollyhock House

Fallingwater

Herbert and Katherine Jacobs House

Taliesin West

Solomon R. Guggenheim Museum