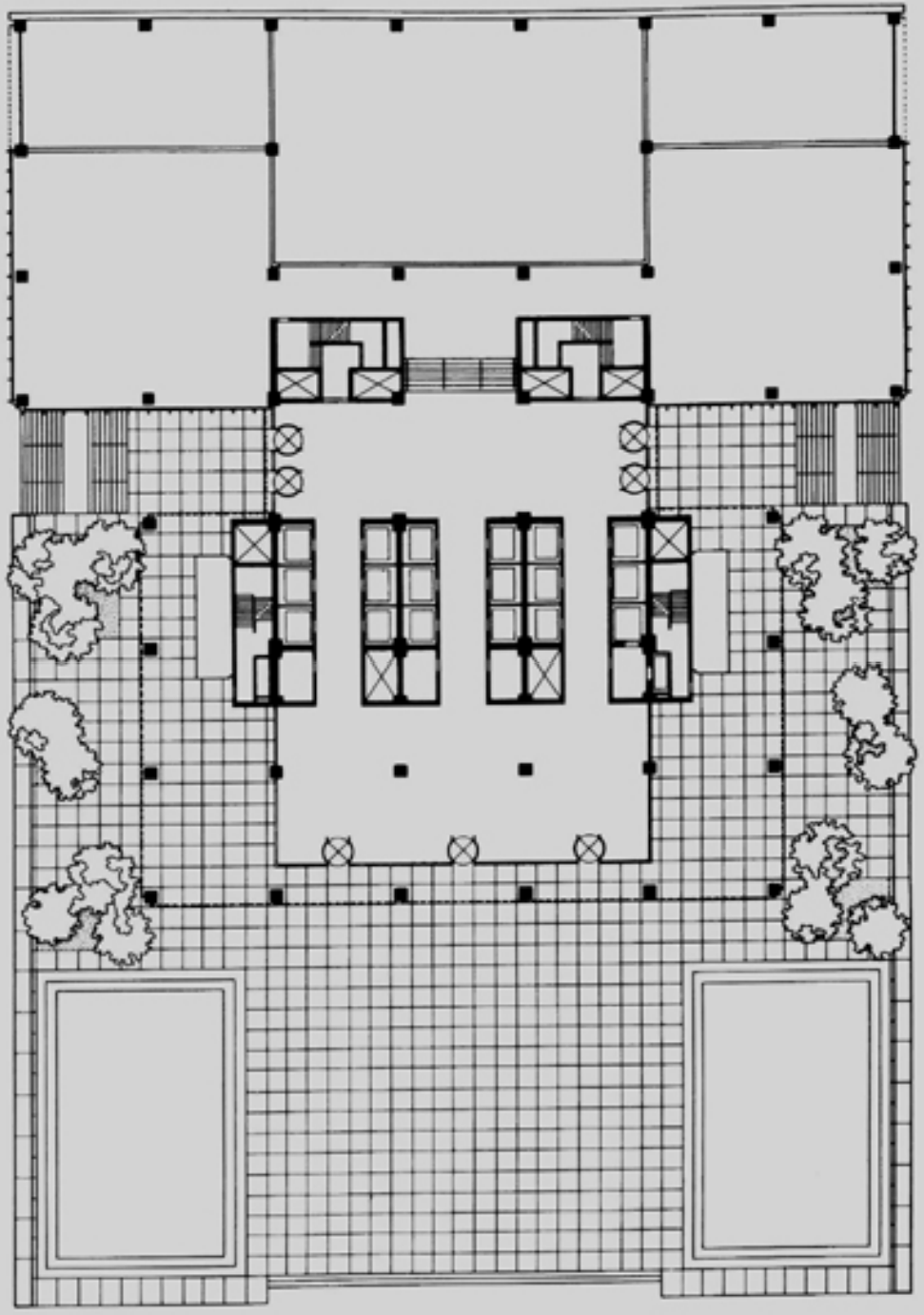
1 TECTÓNICA

ELEMENTOS

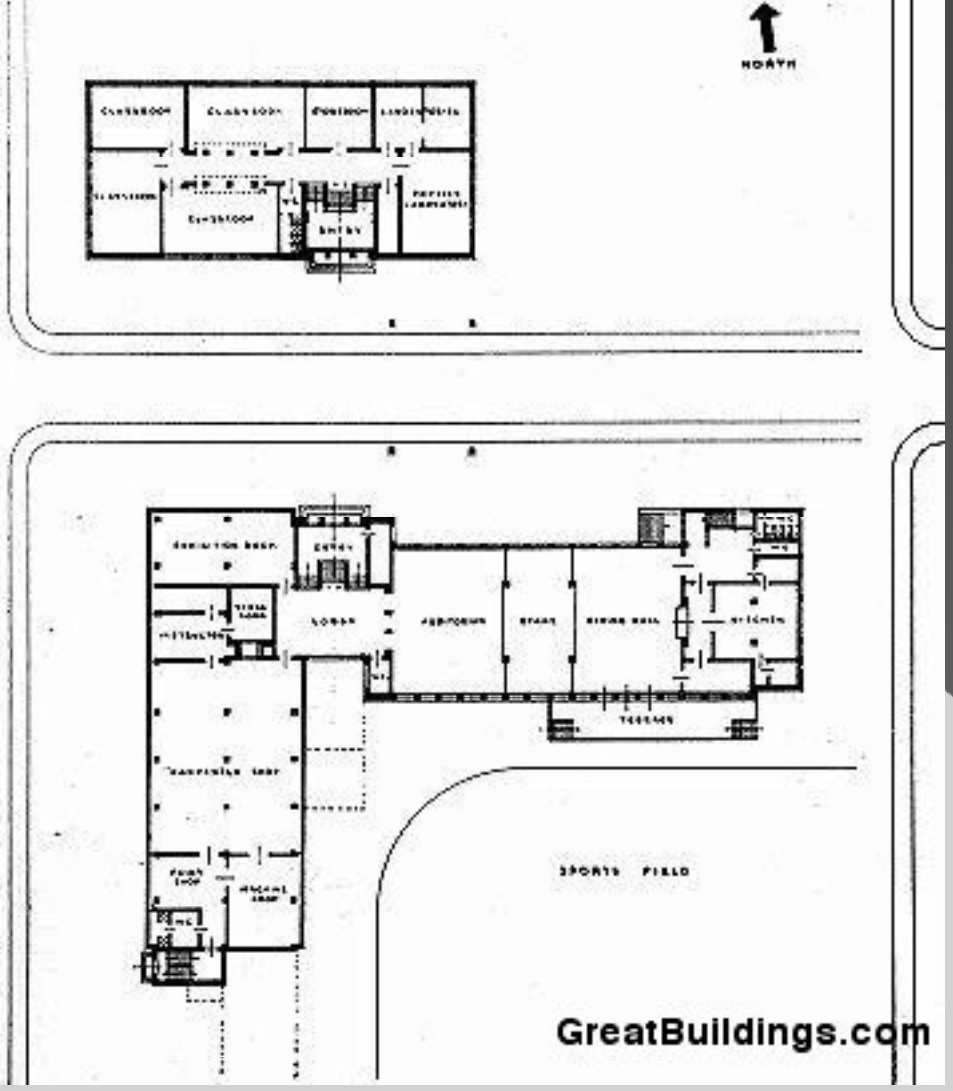
PUENTE SOBRE EL RIO EBRO (LOGROÑO). 140 M. DE LUZ
BRIDGE OVER THE EBRO RIVER (LOGROÑO). SPAN LENGTH 140 M.

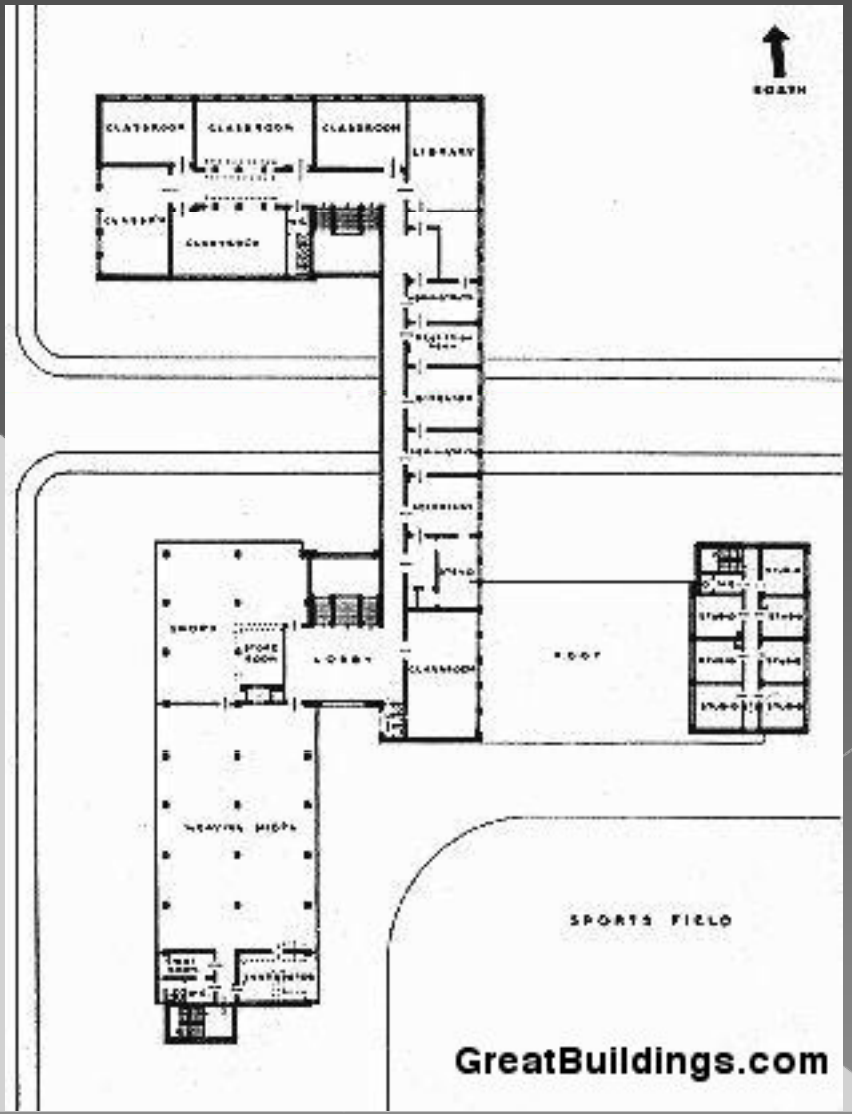
2 TECTÓNICA DEL POSMODERNISMO

EDIFICIO SEAGRAM
MIES VAN DER ROHE
1958

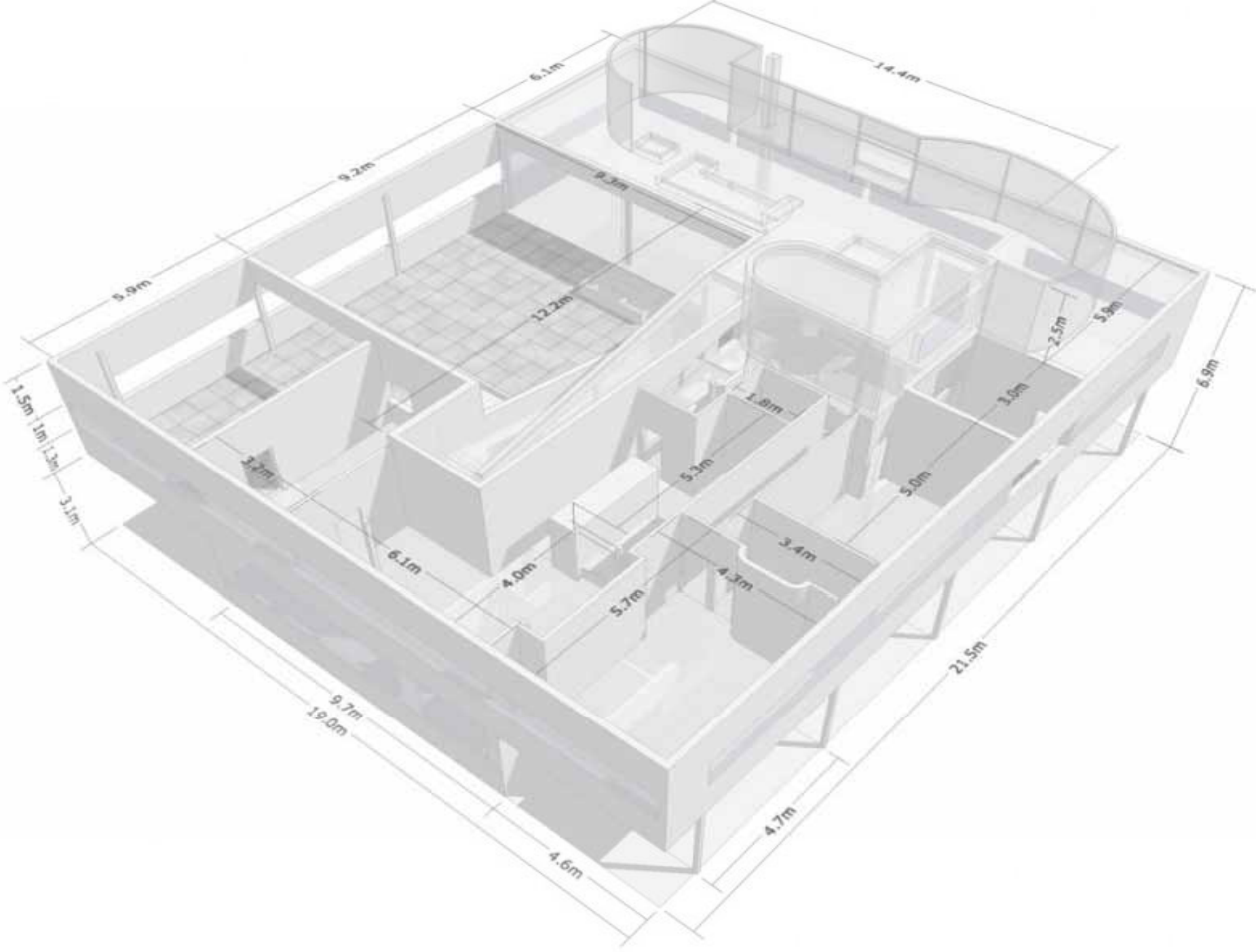


BAUHAUS
WALTER GROPIUS
1919

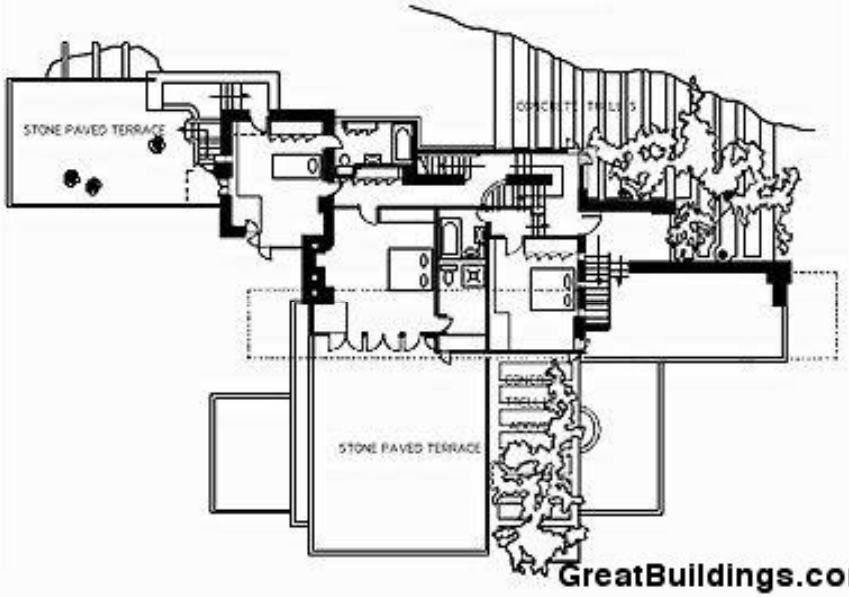

NORTH
SPORTS FIELD
GreatBuildings.com

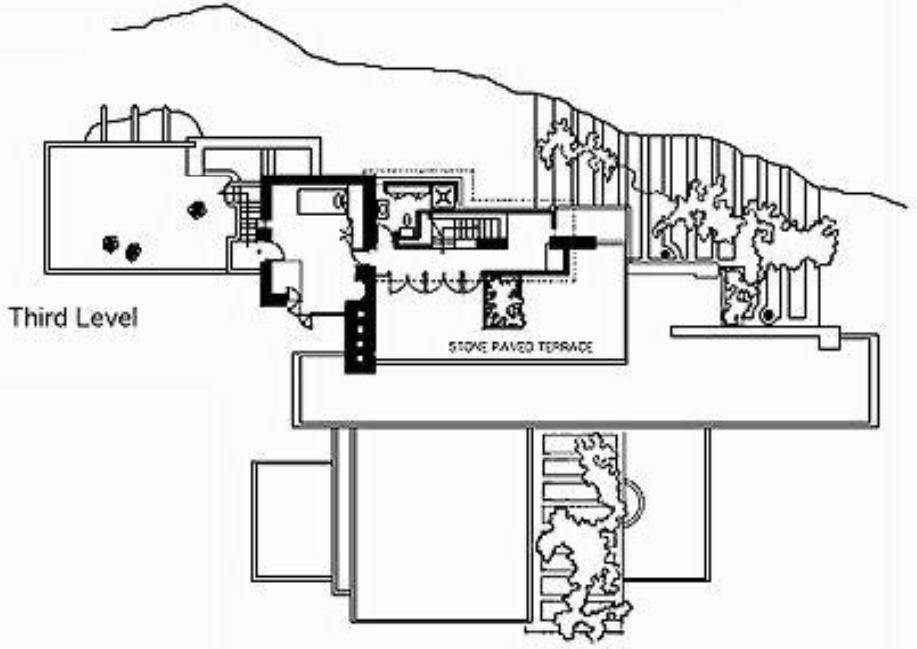

NORTH
CLASSROOM
CLASSROOM
CLASSROOM
LIBRARY
LOBBY
SHOPS
STORE ROOM
WEAVING SHOPS
SPORTS FIELD
GreatBuildings.com

VILLA SAVOYE
LE CORBUSIER
1929


6.1m
14.4m
9.2m
8.9m
9.3m
12.2m
1.5m
1m
1.3m
3.1m
3.7m
1.8m
5.3m
2.5m
5.9m
3.0m
5.0m
6.9m
6.1m
4.0m
5.7m
4.3m
3.4m
9.7m
19.0m
4.6m
4.7m
21.5m

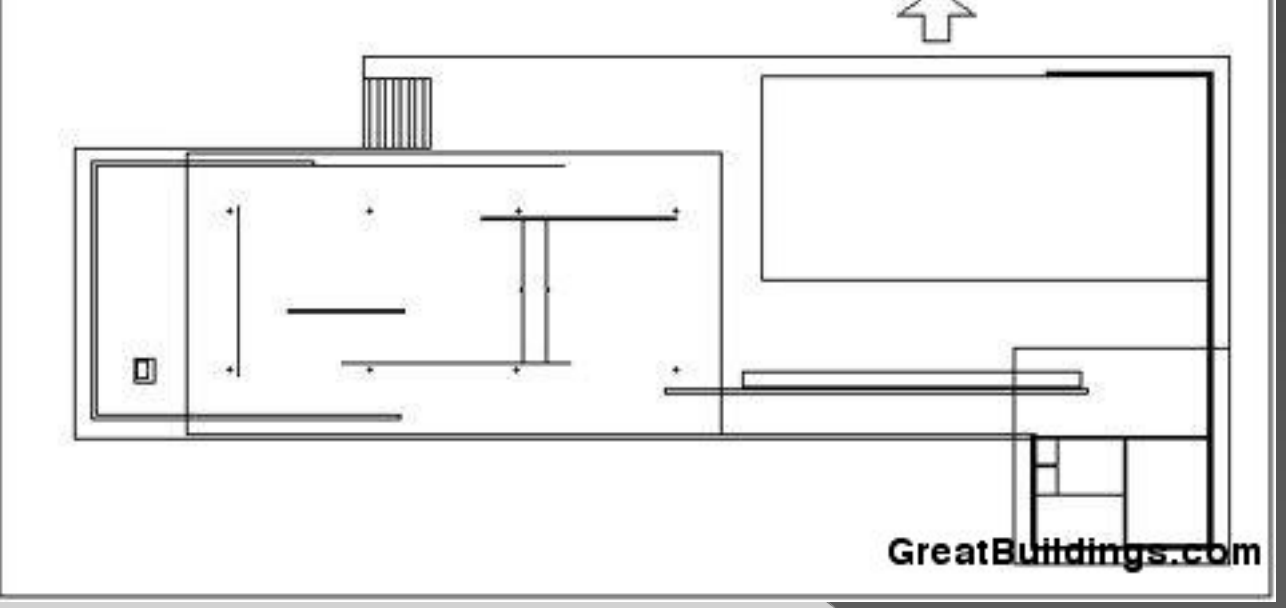
CASA DE LA CASCADA
FRANK LLOYD WRIGHT
1939

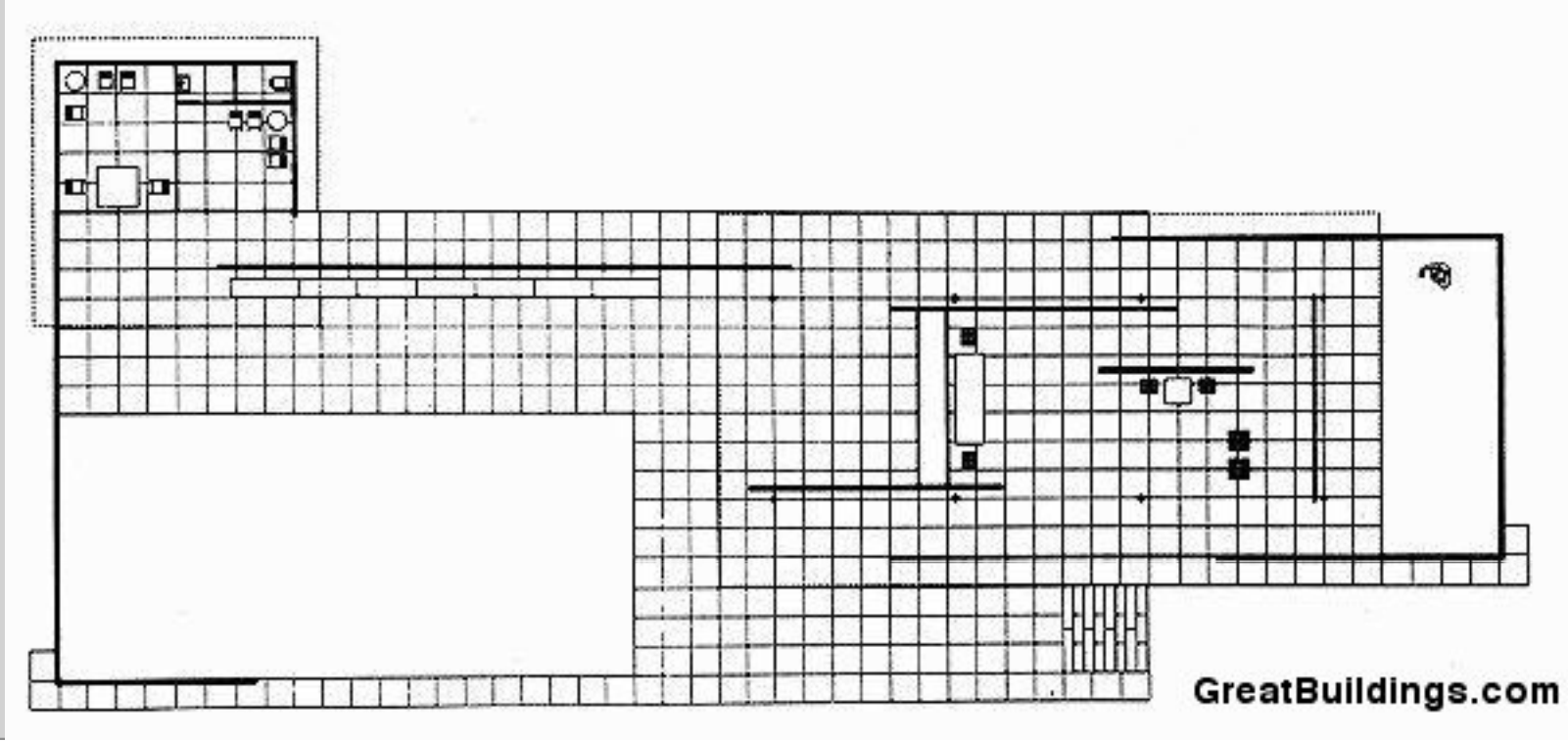


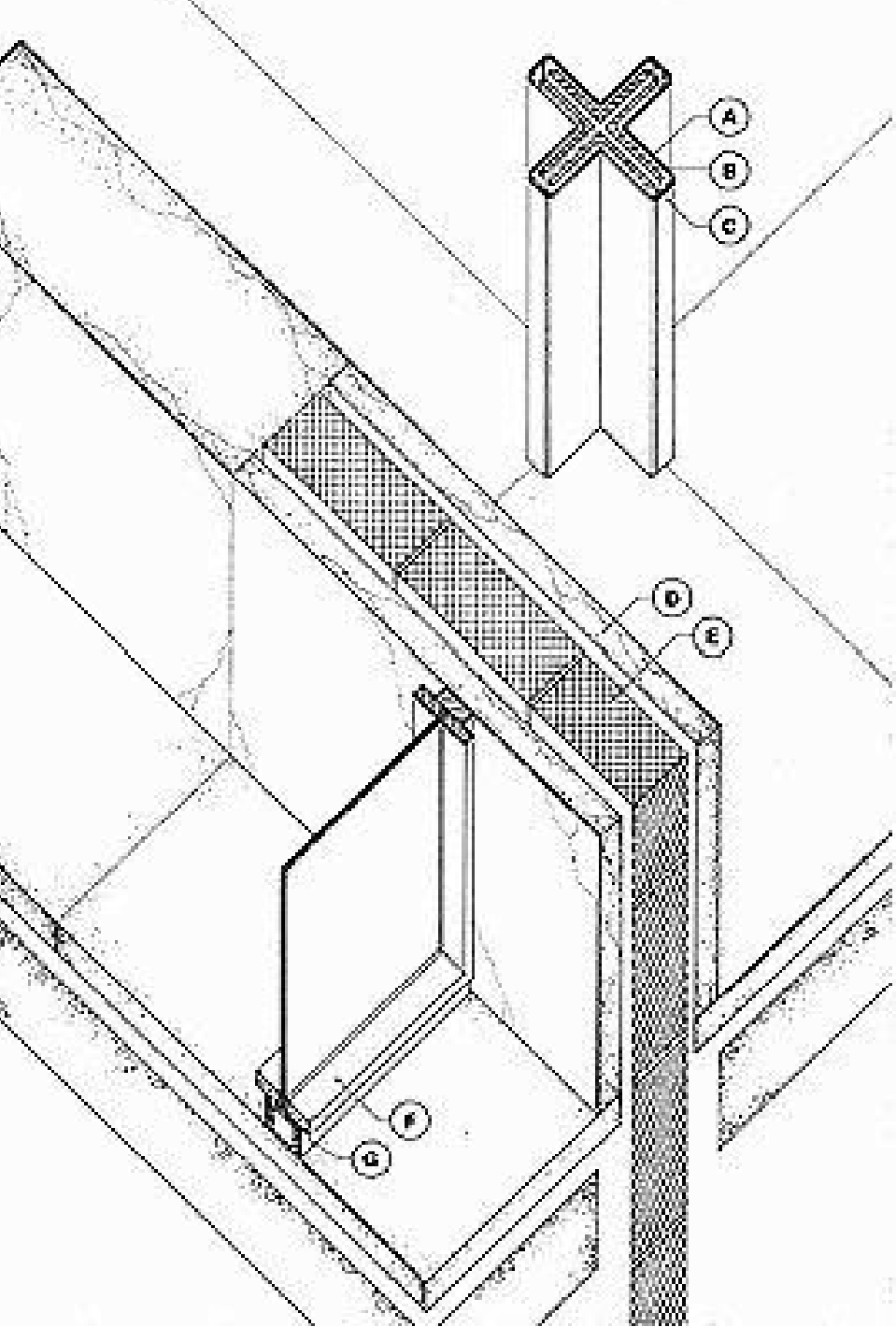


3 INTERPRETACIÓN DE LA TECTÓNICA


PABELLON DE BARCELONA
MIES VAN DER ROHE
1929
www.GreatBuildings.com


GreatBuildings.com


GreatBuildings.com



A Chrome-plated sheet-metal column cover.

B Structural column: four rolled steel angles bolted together.

C Chrome-plated sheet-metal cover, attached with machine screws (a rare example of exposed fasteners in Mies's work).

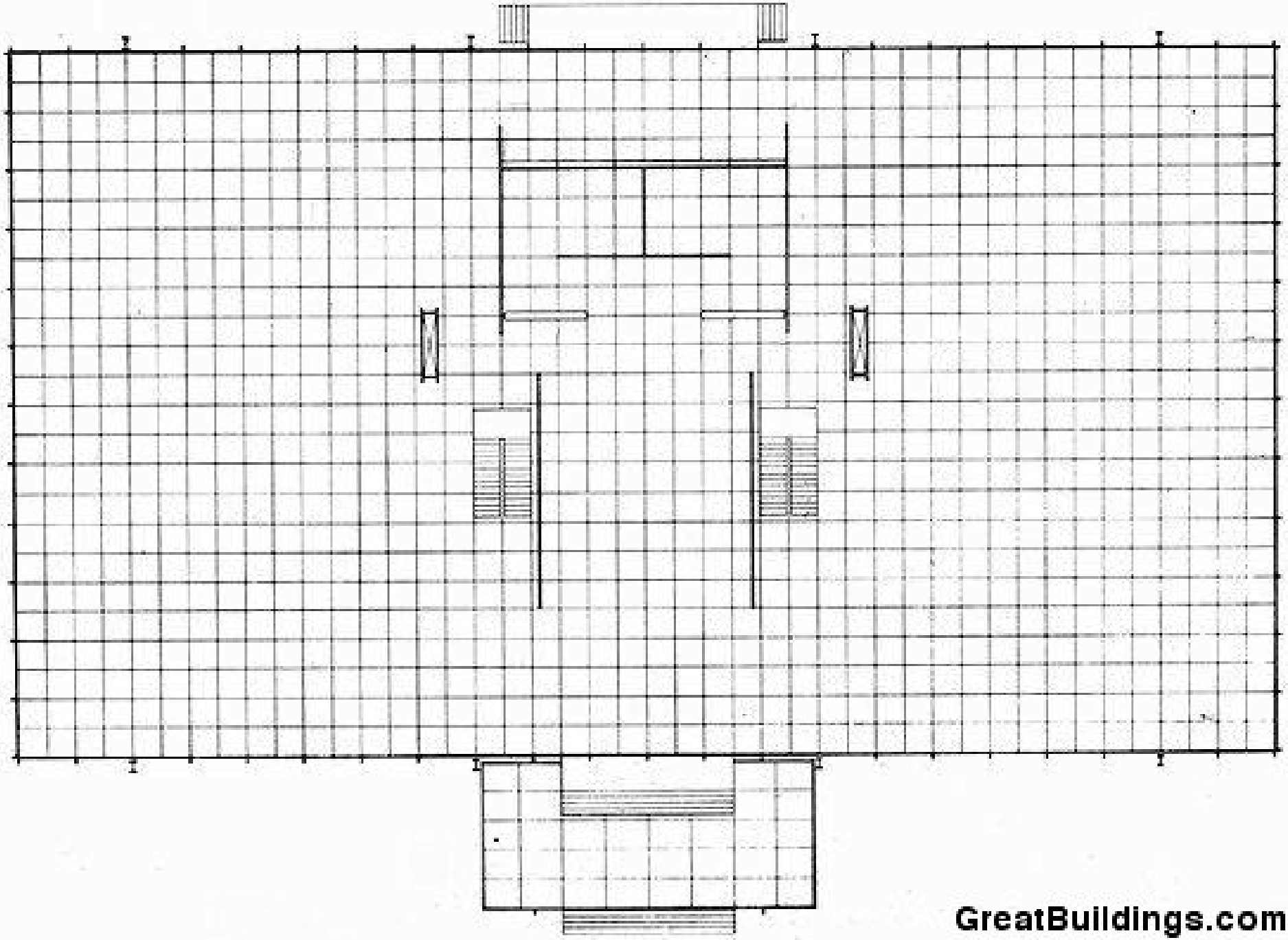
D Marble facing. The marble is made as thin as possible to reduce expense. Only the end pieces are solid, so the entire wall appears monolithic.

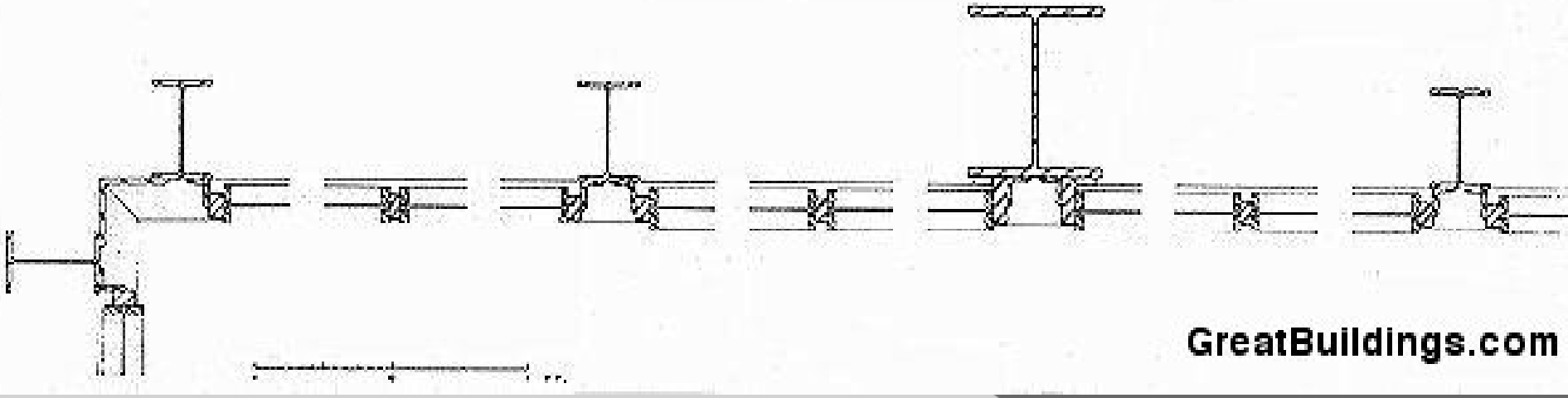
E Brick or concrete masonry-core wall.

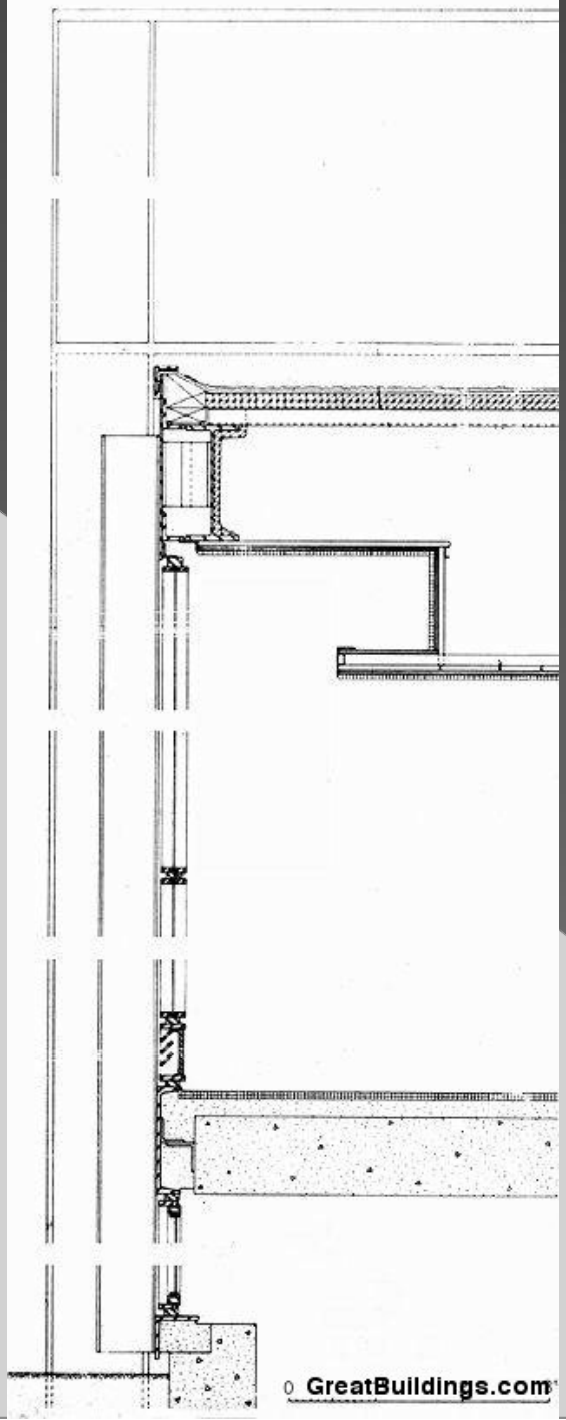
F Bronze glass stop, attached to base with machine screws.

G Window-frame base, fabricated from two structural steel angles which are then clad with bronze sheets.

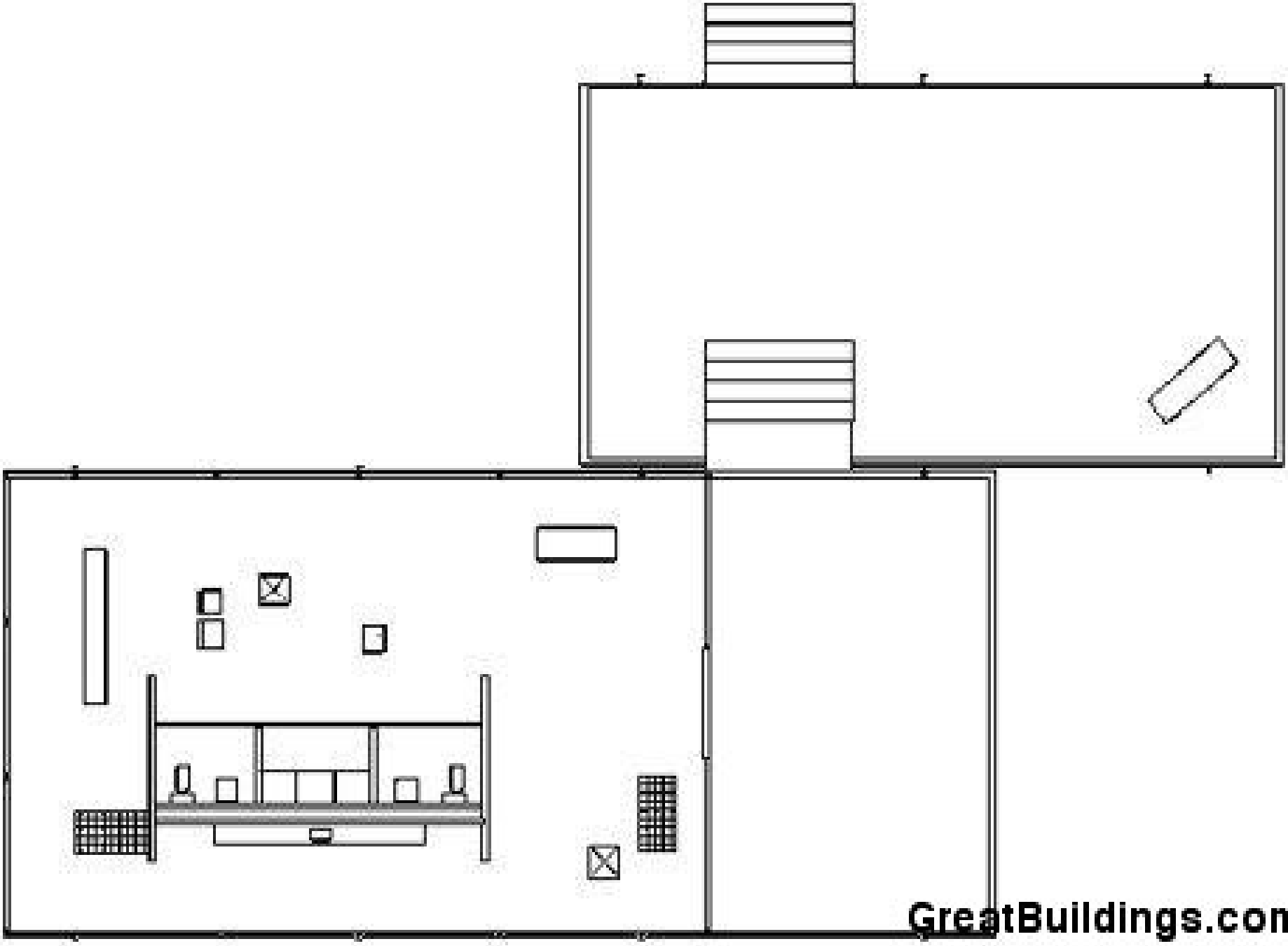

CROWN HALL
MIES VAN DER ROHE
1956
www.GreatBuildings.com

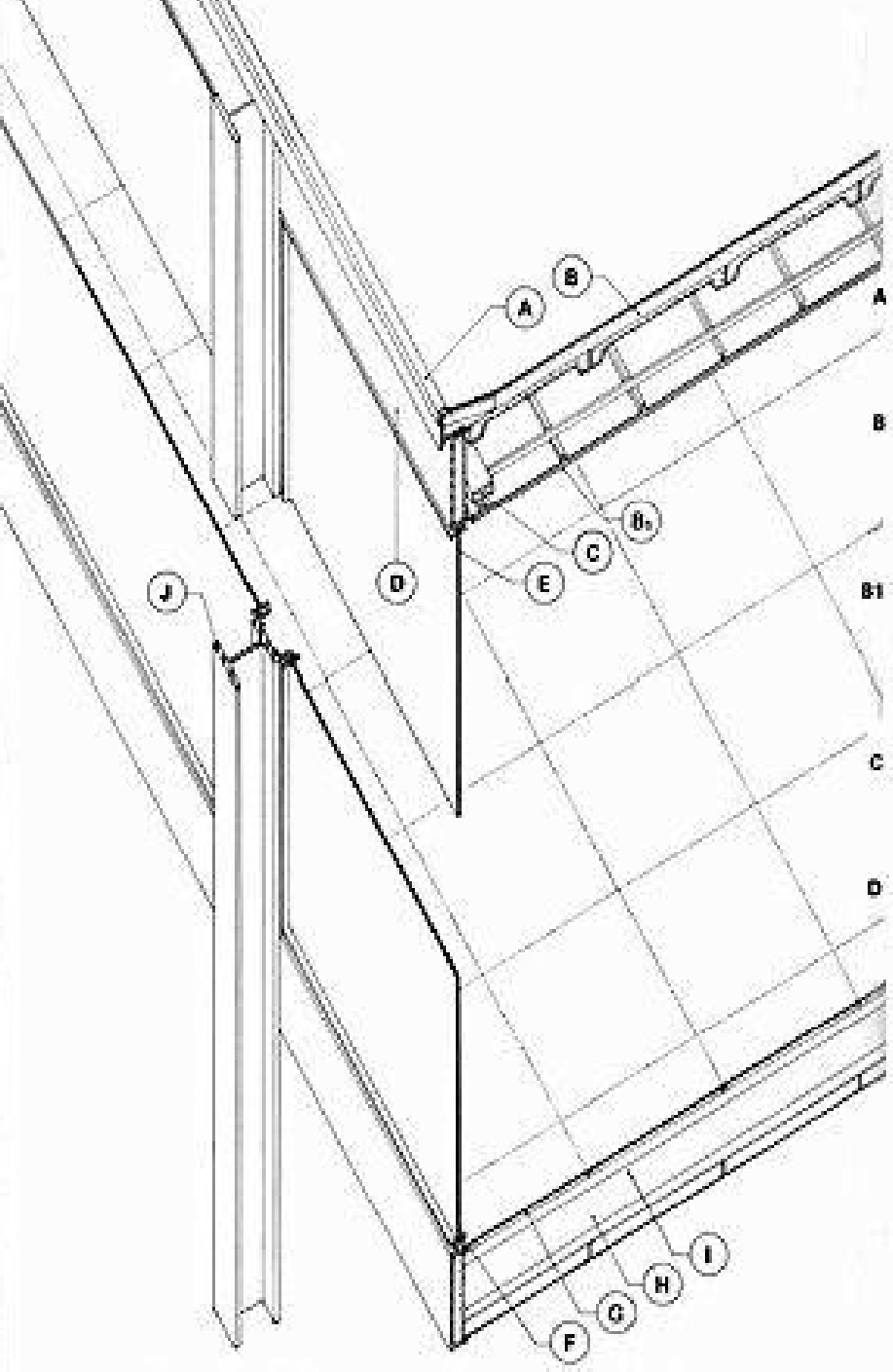



GreatBuildings.com


GreatBuildings.com


FRANSWORTH HOUSE
MIES VAN DER ROHE
1946
www.GreatBuildings.com


GreatBuildings.com



A Steel coping with lead flashing. As in the Lange house, this piece is made from a rolled steel section.

B Roof construction: built-up roof on foam glass insulation on precast plans supported by steel beams (not shown).

B1 Suspended plaster ceiling. This conceals the complex steel-and-concrete structure above, reducing it visually to a simple plane.

C Wood 2 × 4. This provides an attachment for the plaster ceiling at its edge.

D 15"-deep steel channel backed with insulation. This is an unusually deep section for a channel; a wide flange section would have been much easier to obtain, but Mies wanted a flat surface on the exterior.

E ¼" plate glass.

F Window frame fabricated from simple 1½" × ½" and 1" × 2" steel rectangles.

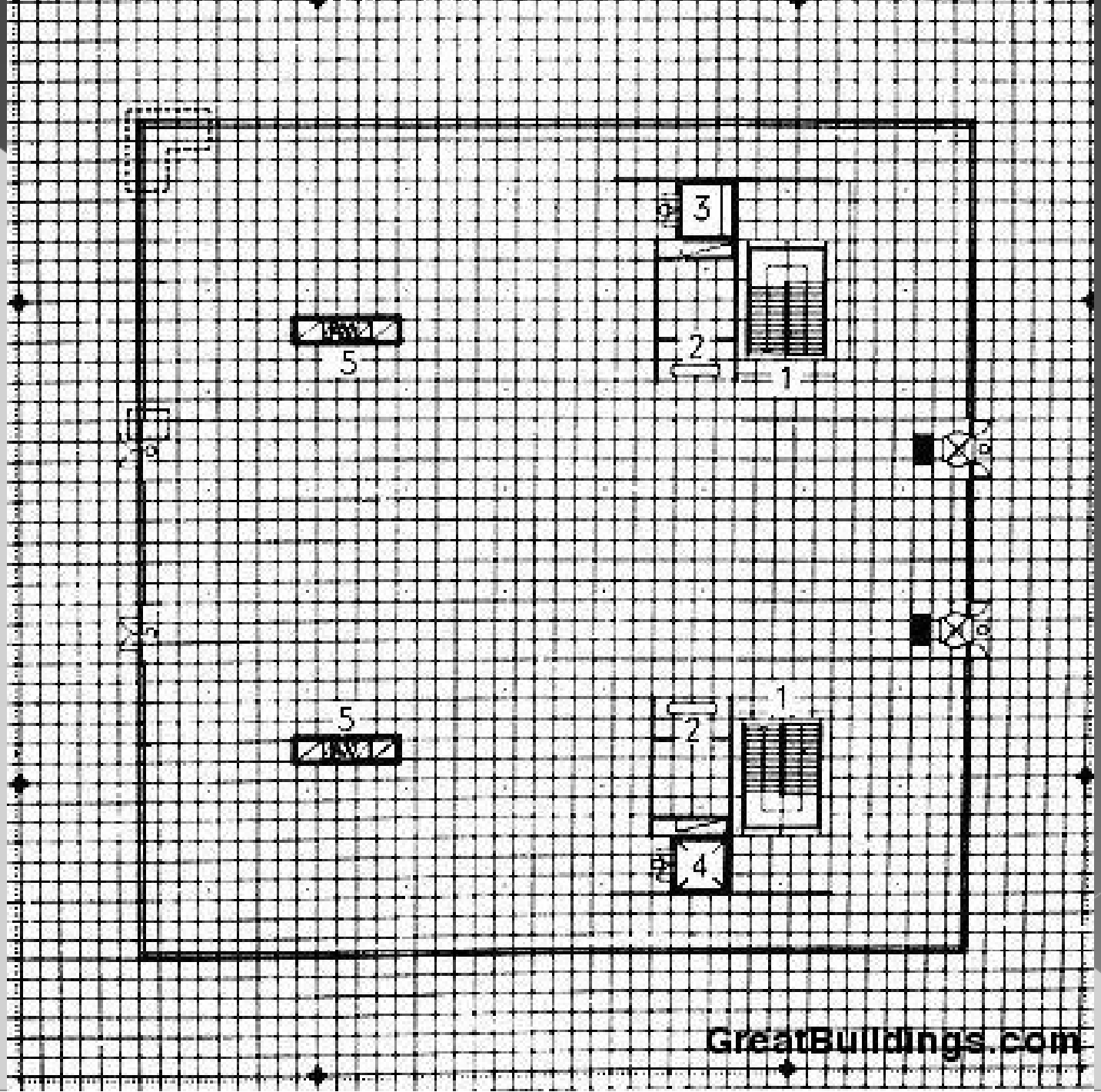
G Travertine floor set in bed of grout.

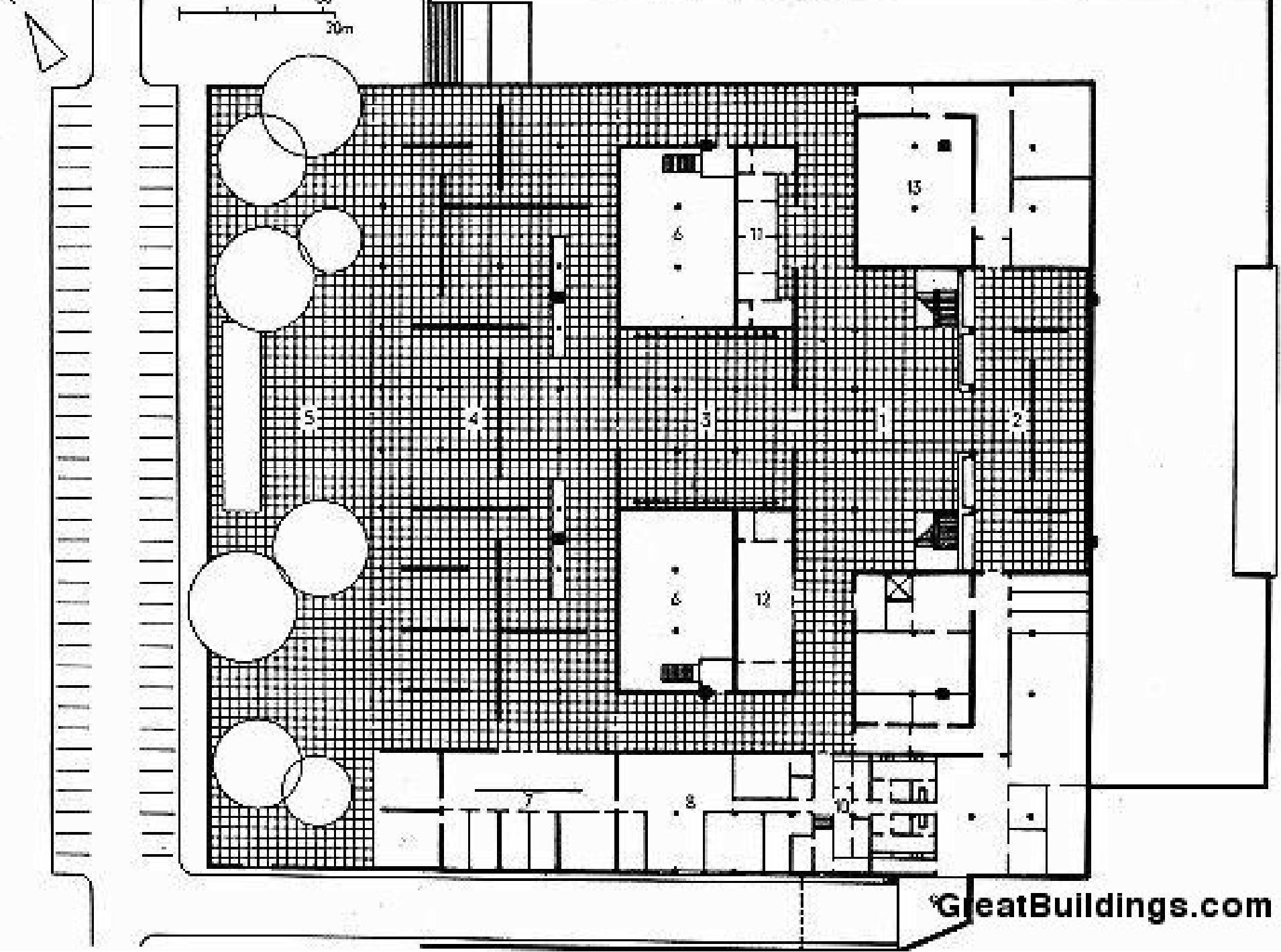
H Floor construction. The bottom layer is precast concrete planks. A layer of insulation is placed on top; and then covered with poured-in-place concrete.

I Radiant heating coils. There is little or no space for ductwork in the floor or the ceiling. Radiant heating provided a convenient solution, since it requires only pipes.

J Steel column. Unlike the Barcelona column, the structural column here is monolithic and exposed. It is joined to the steel channel by plug welds on the concealed side, so no means of fastening are visible.


www.GreatBuildings.com

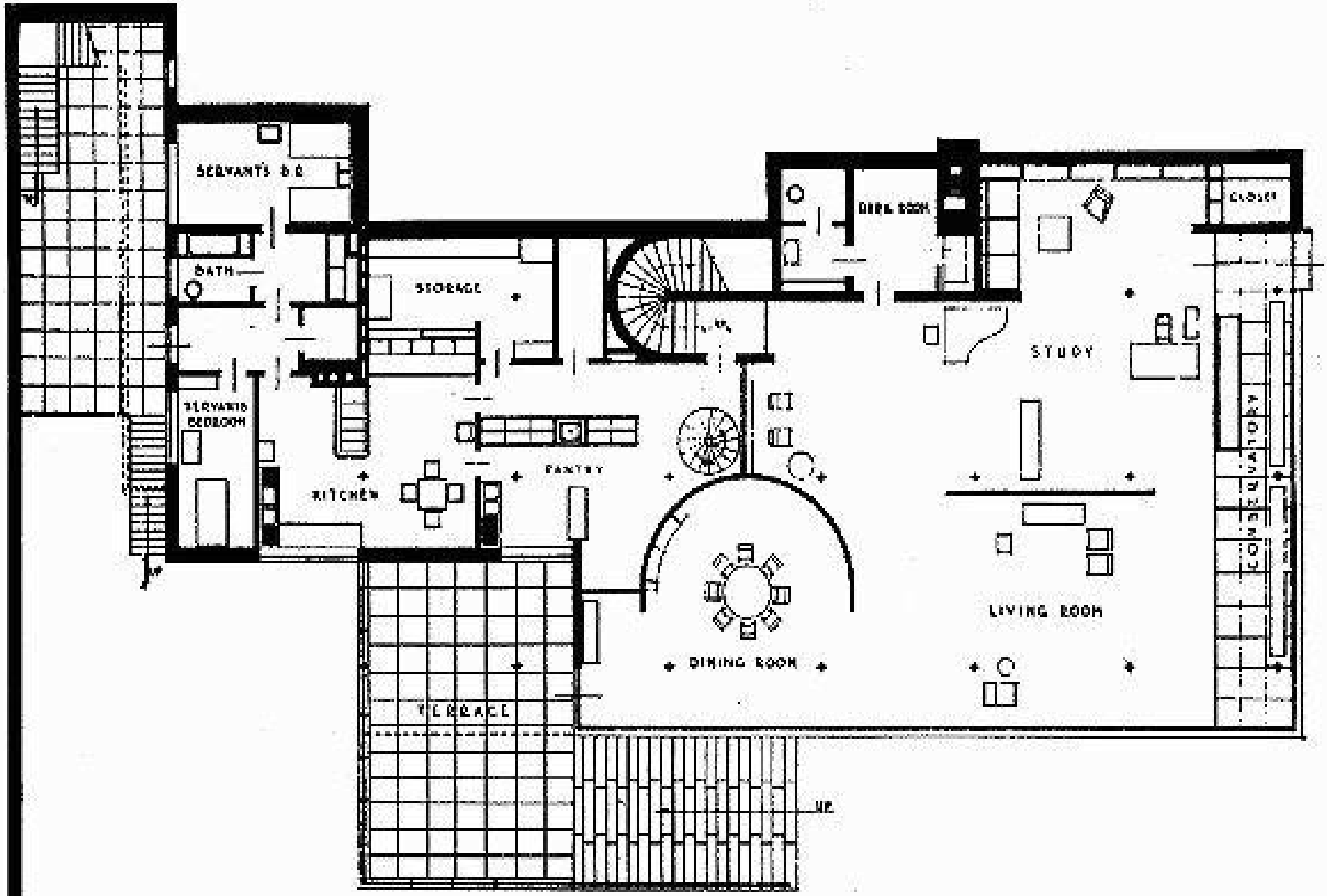

3
2
1
5
5
2
1
4
GreatBuildings.com


20m
1
2
3
4
5
6
7
8
10
11
12
13
GreatBuildings.com

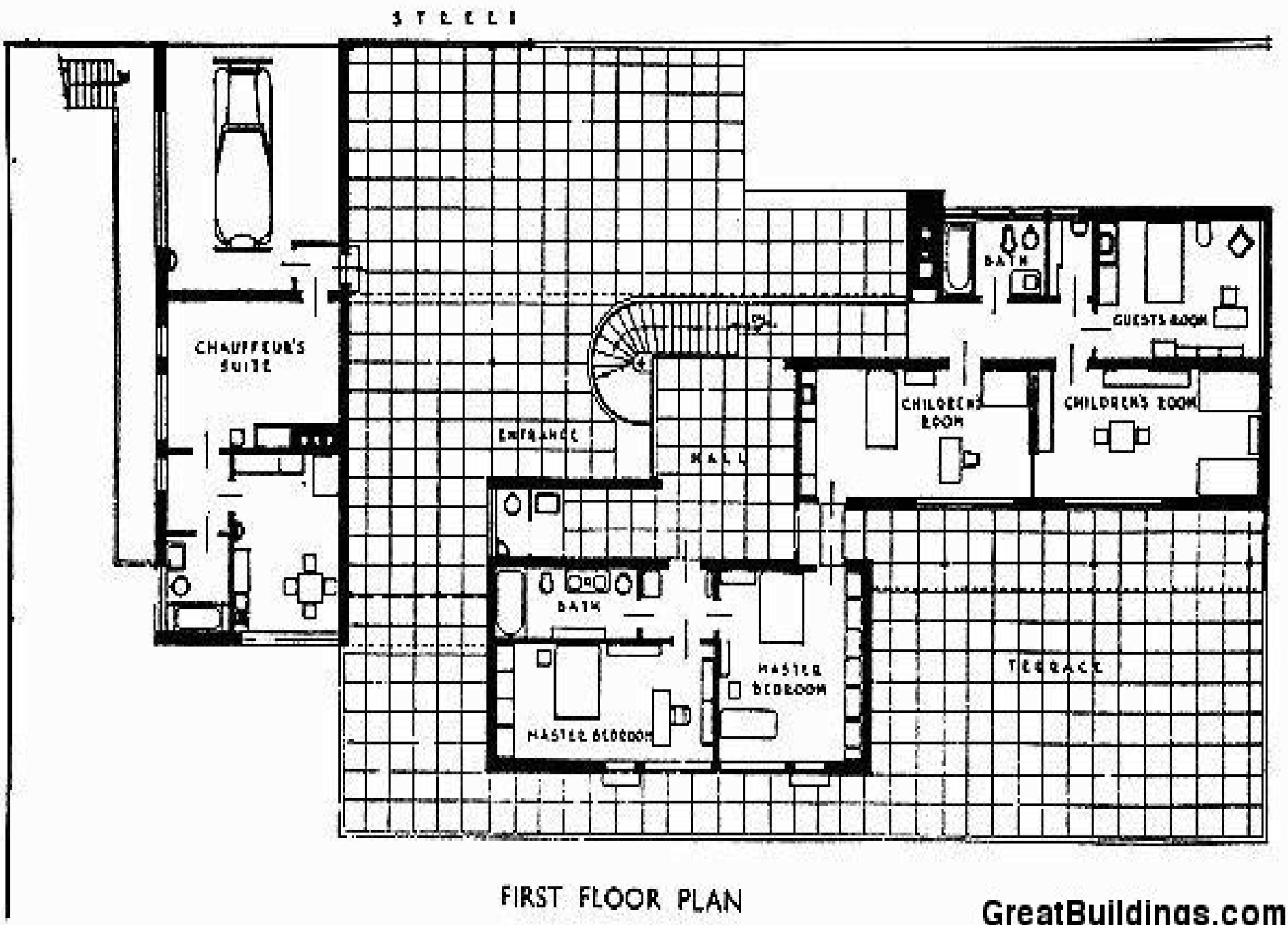
TUGENDHAT HOUSE

MIES VAN DER ROHE

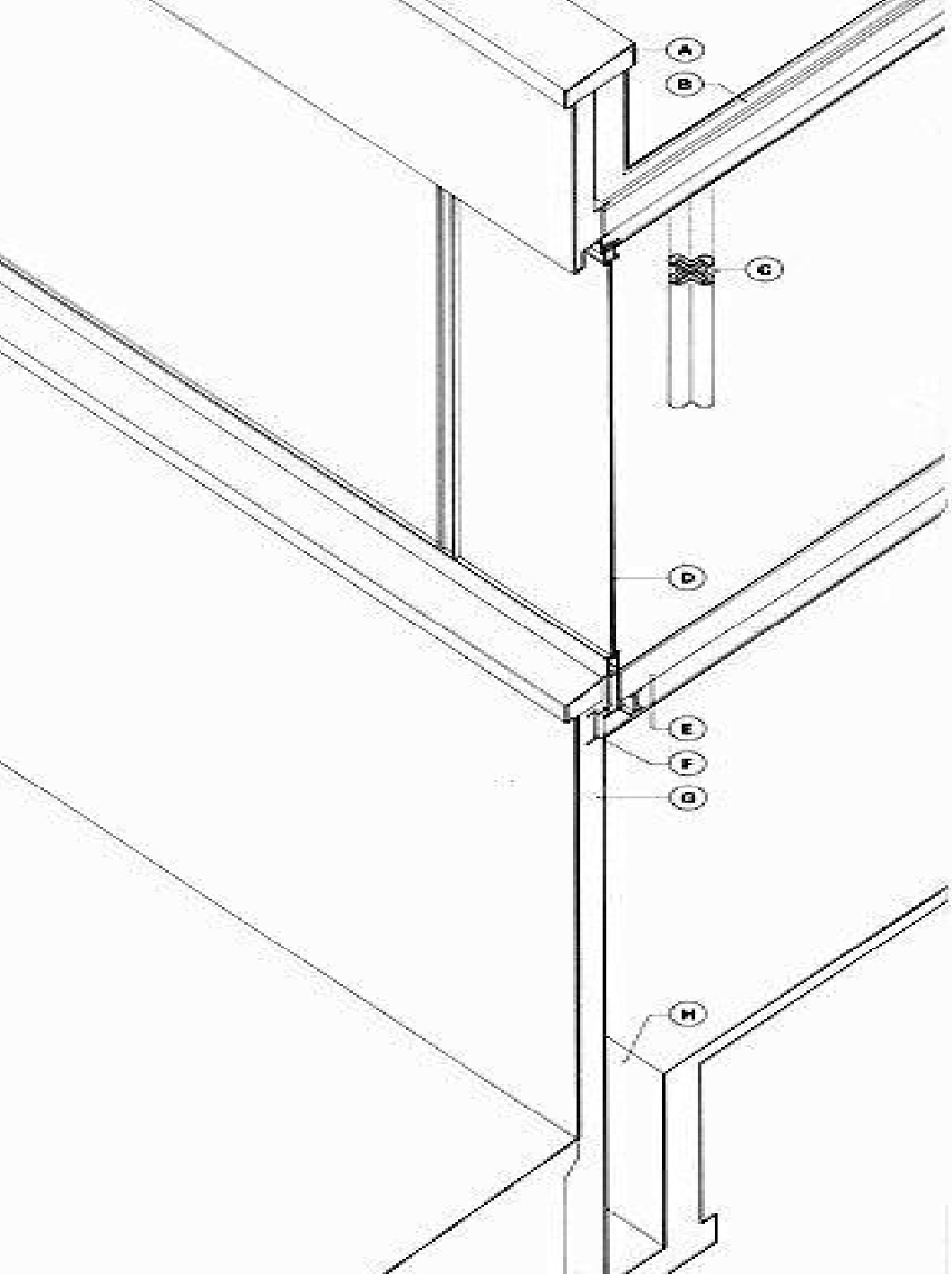
1930



GROUND FLOOR PLAN



FIRST FLOOR PLAN



A Parapet of masonry faced with stucco.

B Floor and deck construction: hollow tiles (probably structural clay tiles), covered with cinder concrete and torfoleum insulation and supported by steel beams. Deck is covered with asphalt and paving slabs of yellow travertine.

C Steel column: four steel angles bolted together, with chrome-plated bronze cover.

D Retractable window. The large windows are bronze, the smaller ones steel.

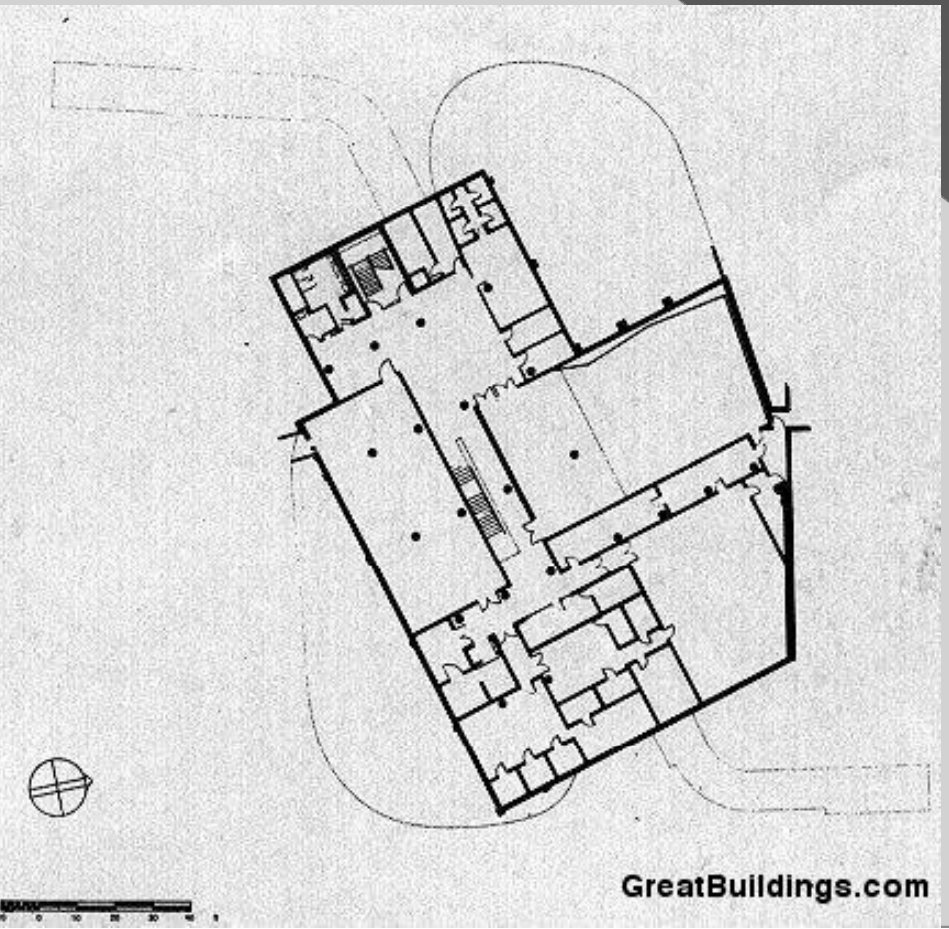
E Floor construction: similar to floor above, with linoleum finish.

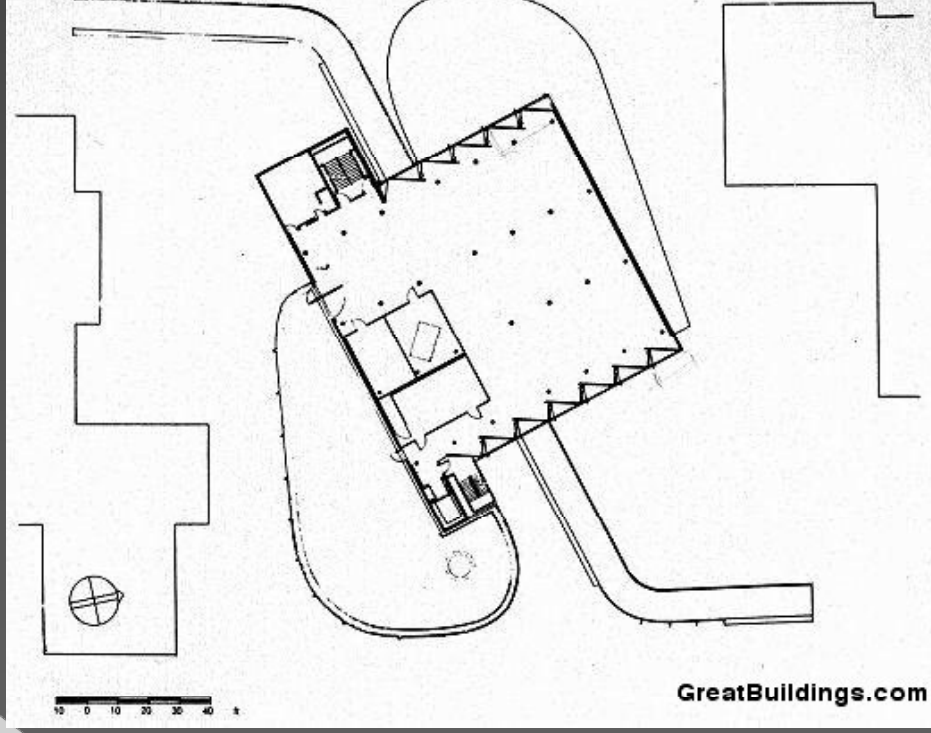
F Steel channel.

G Wall construction: brick walls, with cement plaster on exterior and a layer of torfoleum insulation (compressed peat) covered with plaster on interior.

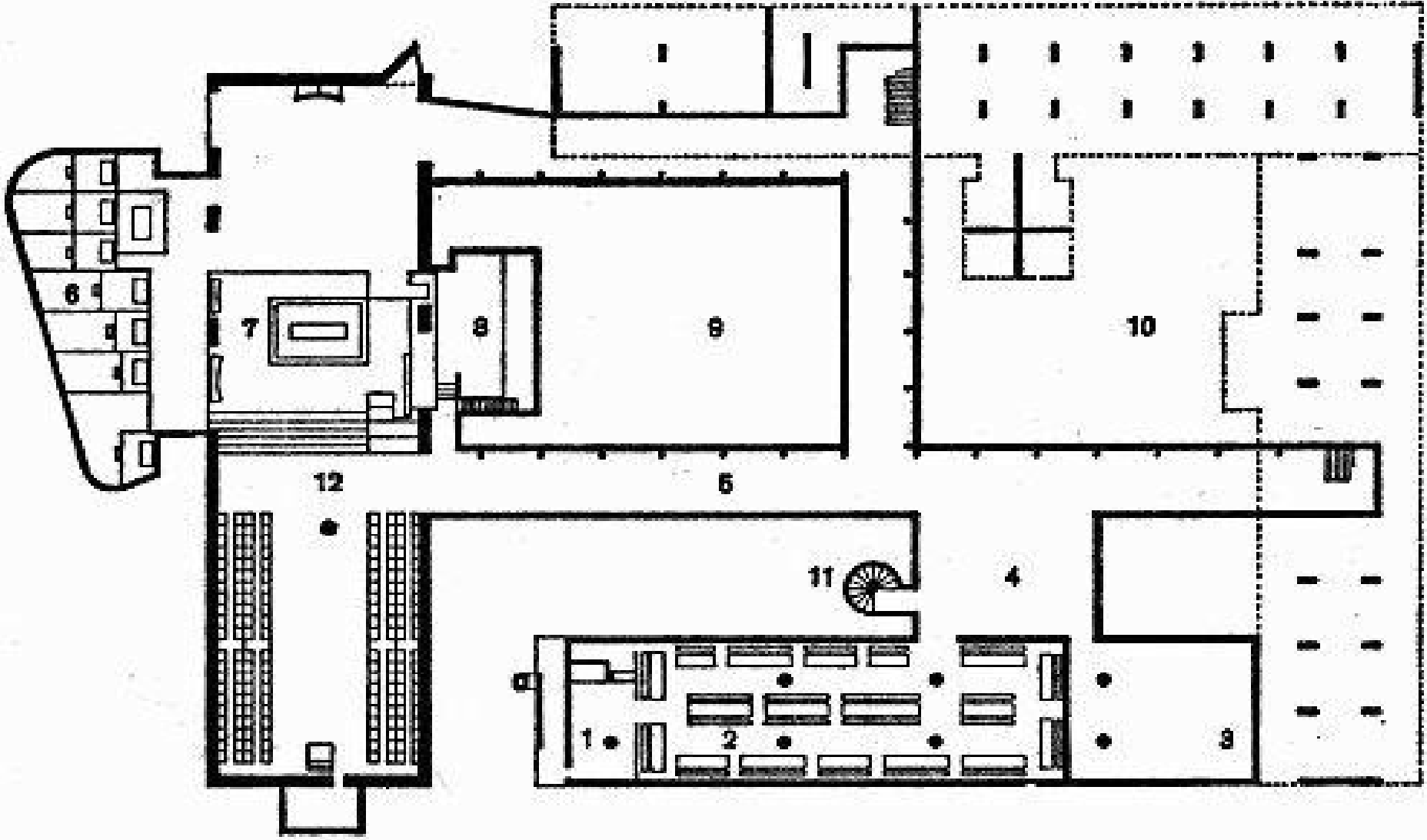
H Foundation, with pocket to receive retractable window.


CARPENTER CENTER
LE CORBUSIER
1964
www.GreatBuildings.com

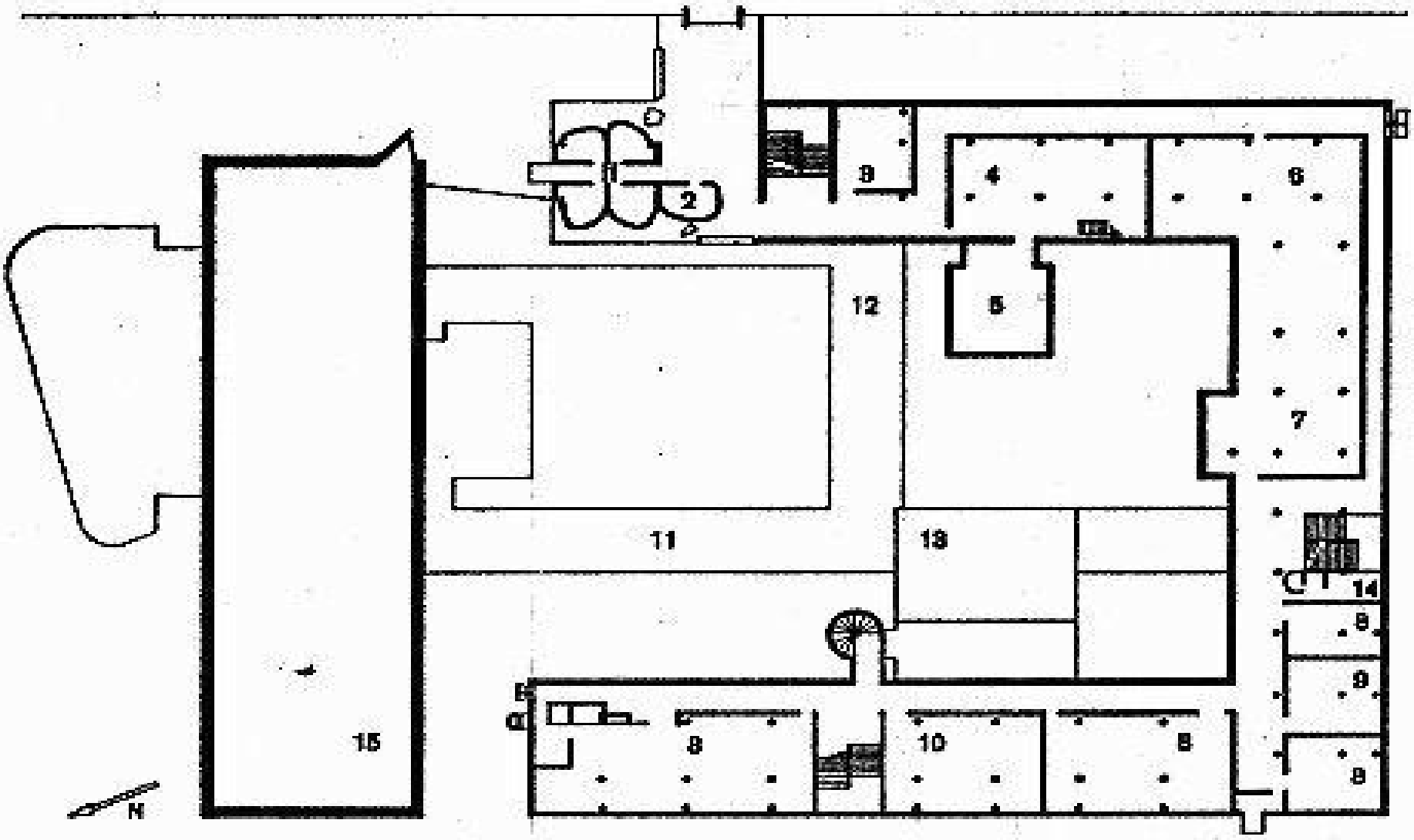

GreatBuildings.com


GreatBuildings.com


CONVENT OF LA TOURETTE
LE CORBUSIER
1960
www.GreatBuildings.com



Refectory floor
1 Pantry, 2 Refectory, 3 Chapter-room, 4 Atrium, 5 Cloister, 6 Lower church, 7 High altar, 8 Sacristy, 9, 10 Courtyard, 11 Spiral staircase, 12 Church



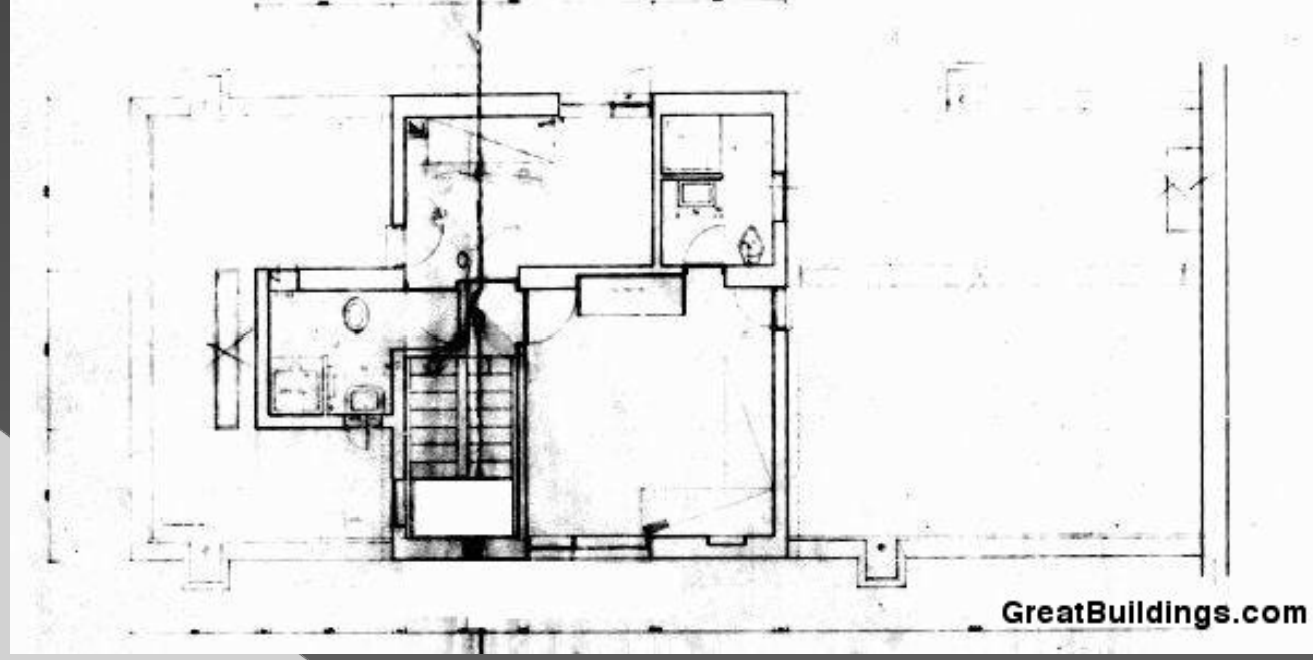
Entrance floor

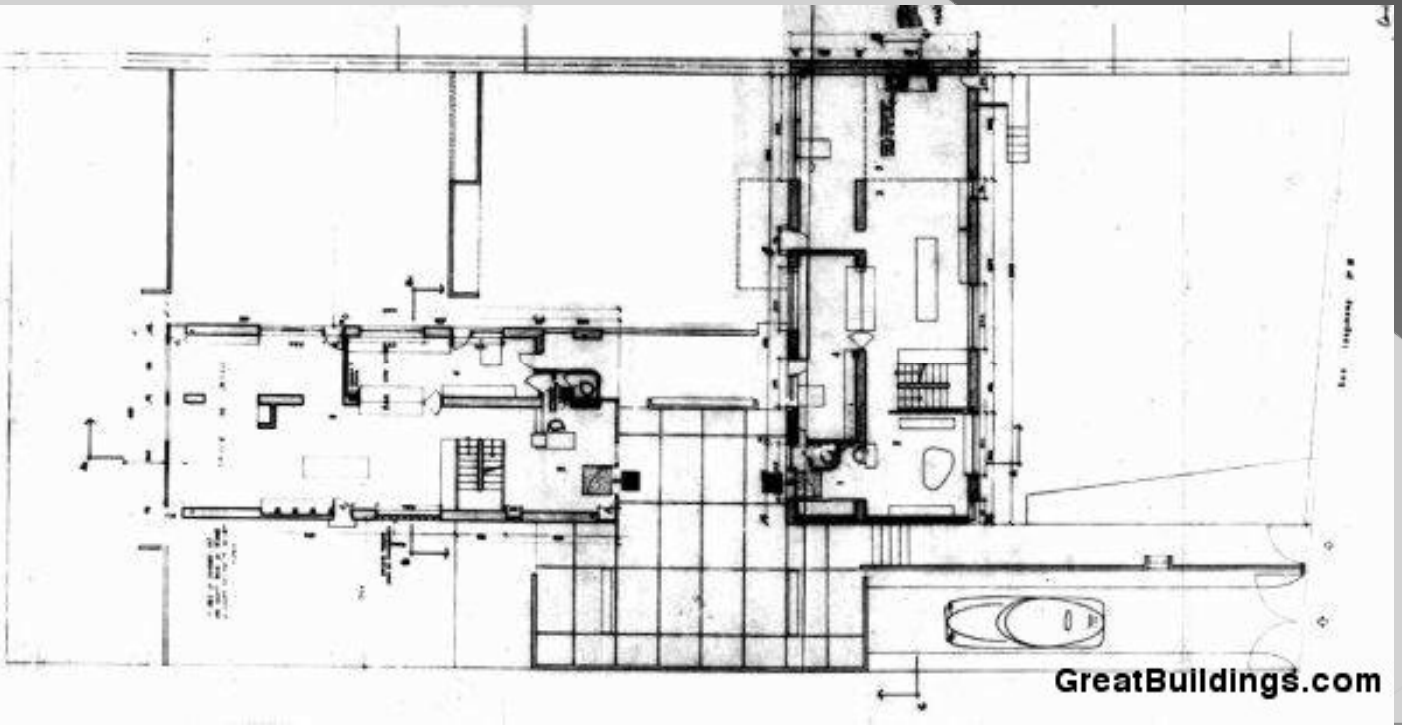
1 Conversation cells, 2 Porter, 3 Room for the lay-brothers, 4 Common-room for the student brothers, 5 Oratory, 6 Reading-room, 7 Library, 8 Lecture rooms, 9 Common-room for the student brothers, 10 Common-room for the fathers, 11, 12 Cloister, 13 Atrium, 14 WC, 15 Church

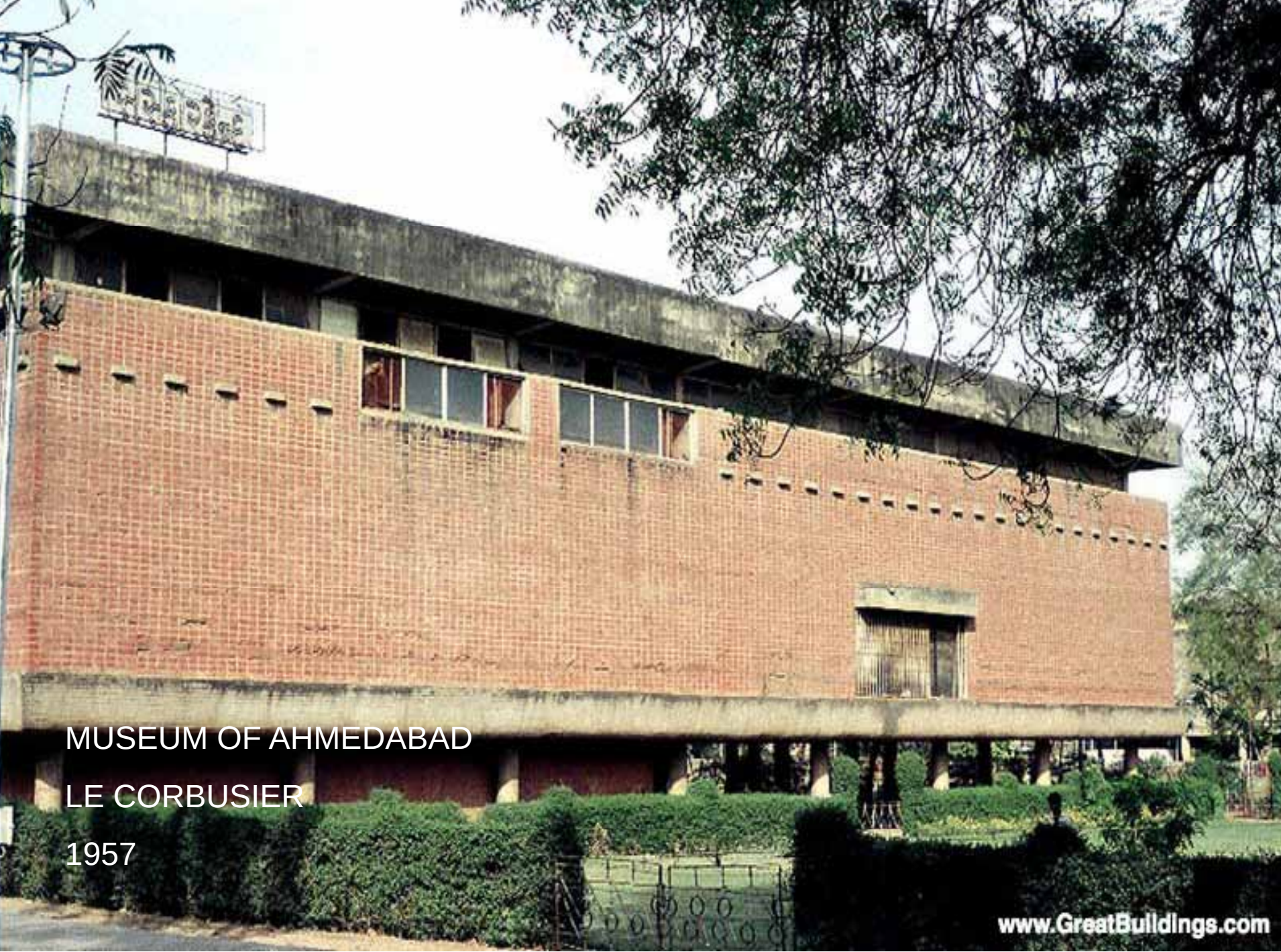
MAISONS JAUL

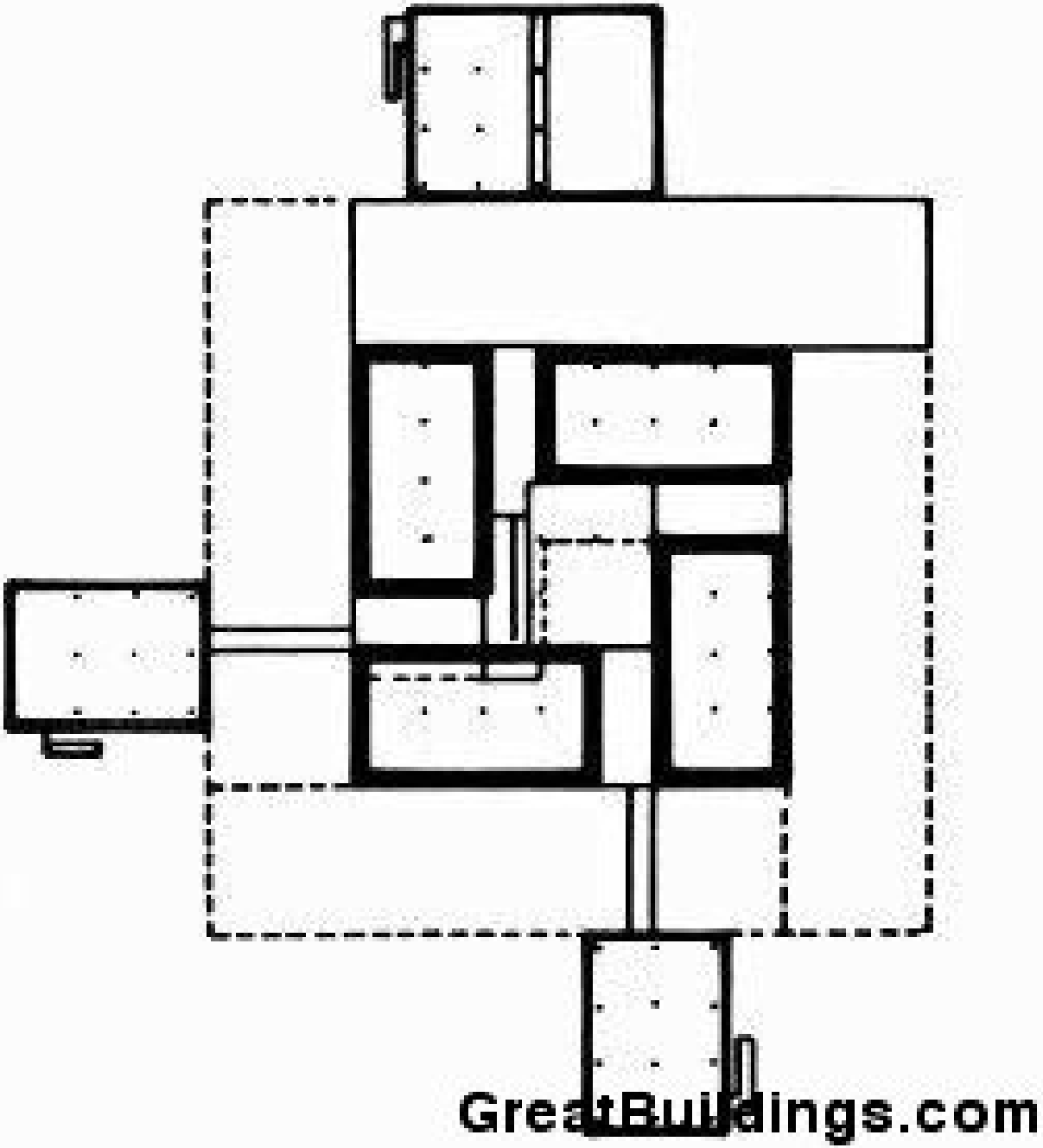
LE CORBUSIER

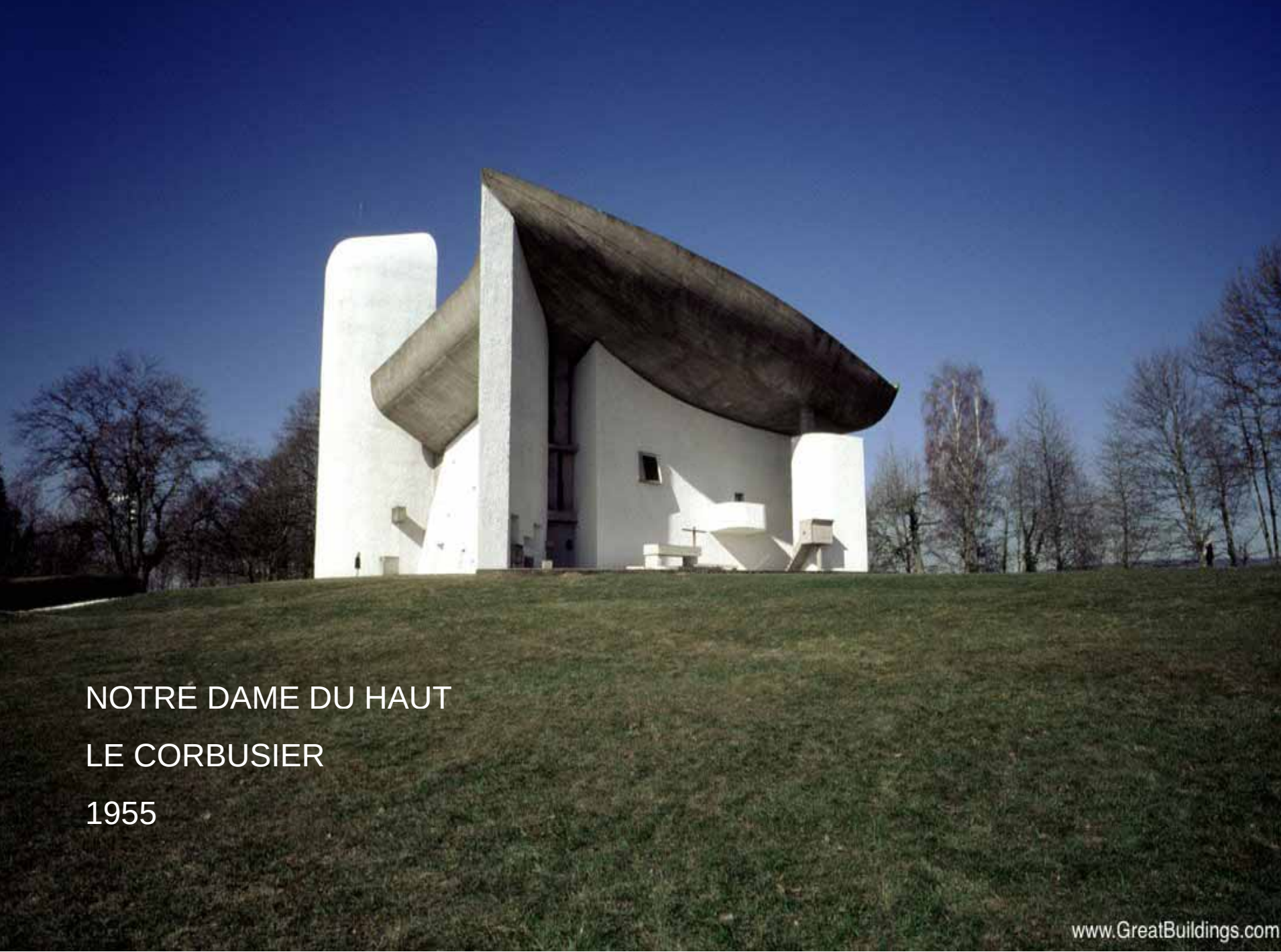
1956

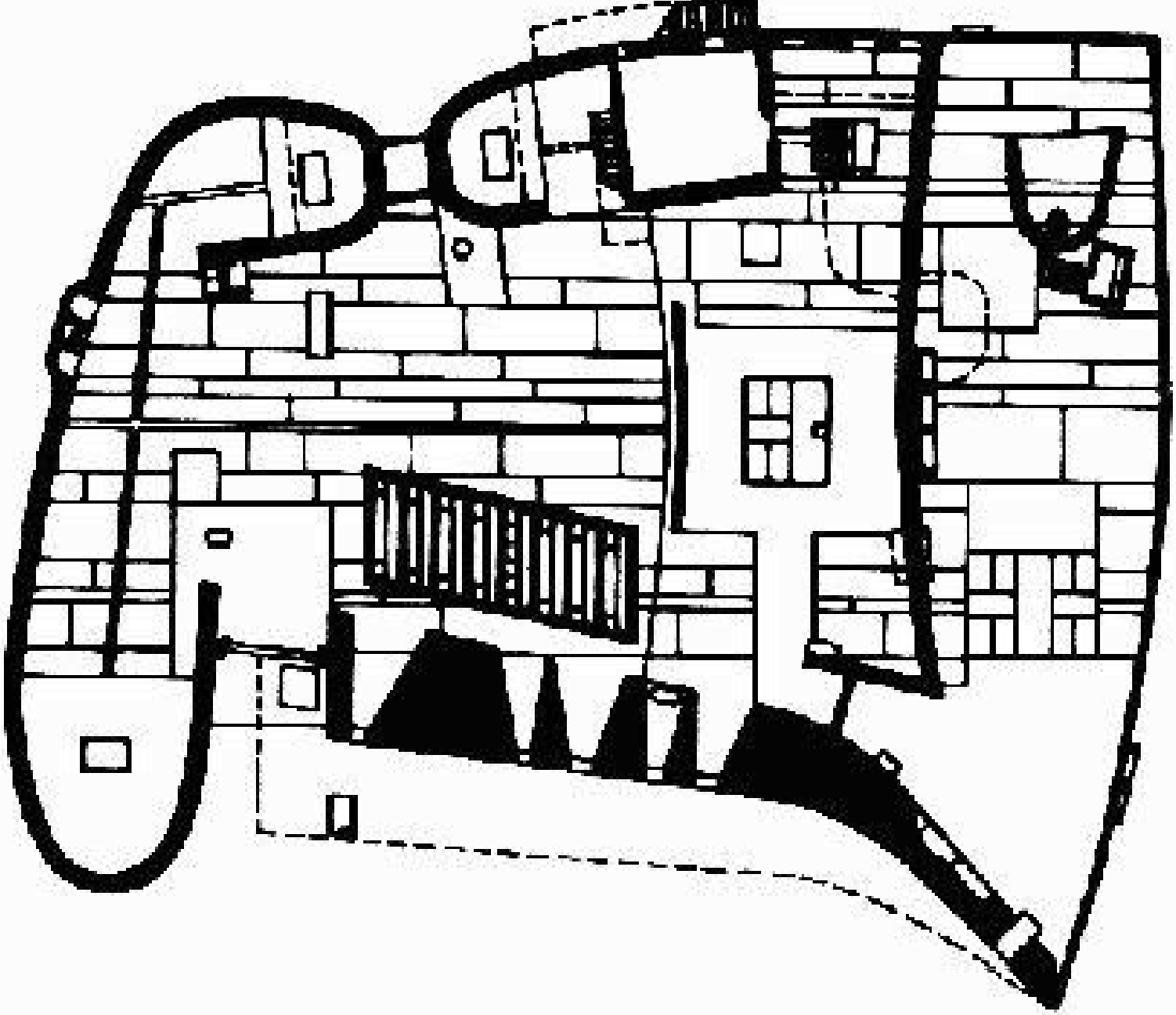

GreatBuildings.com


GreatBuildings.com

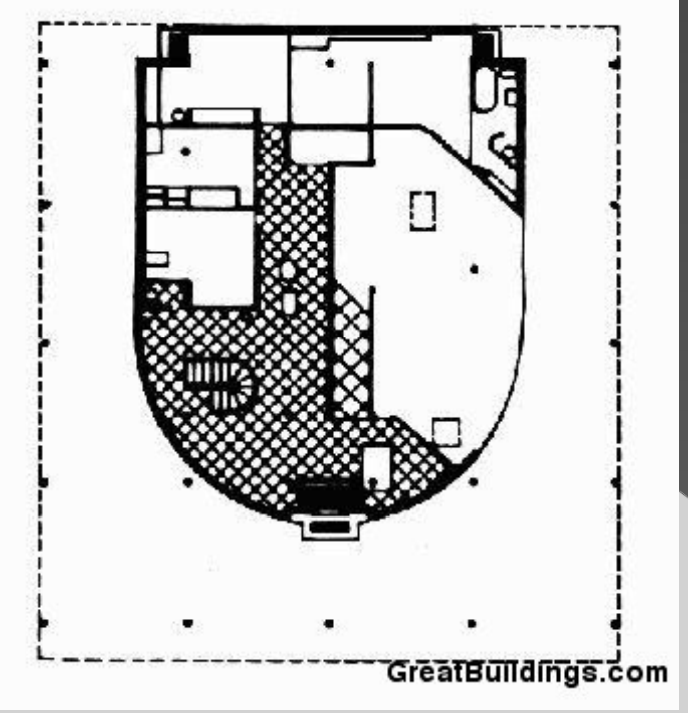

MUSEUM OF AHMEDABAD
LE CORBUSIER
1957
www.GreatBuildings.com

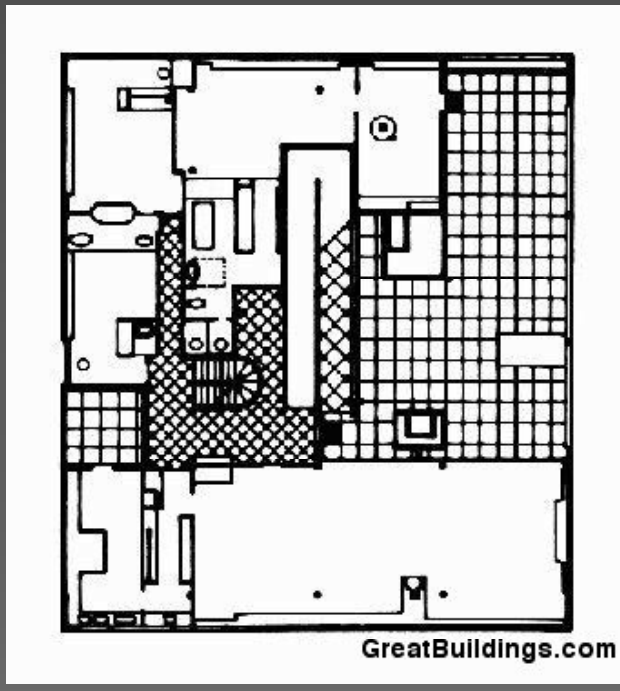

GreatBuildings.com

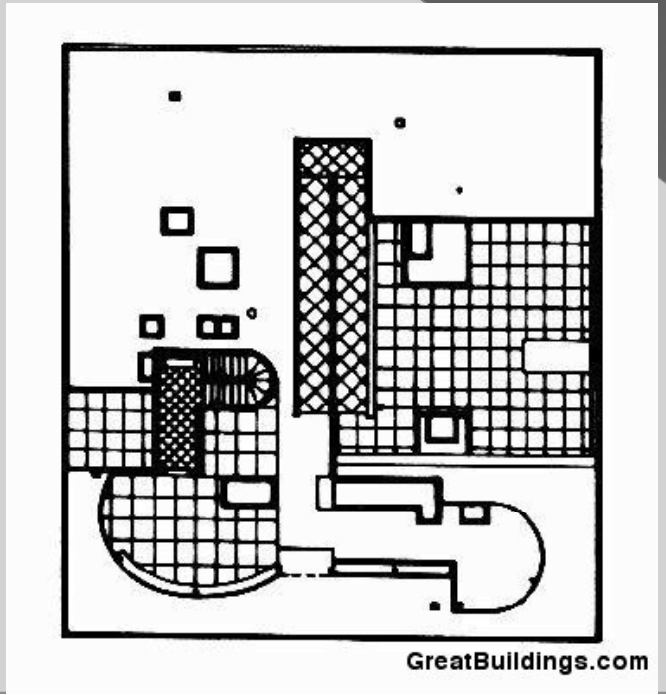

NOTRE DAME DU HAUT
LE CORBUSIER
1955
www.GreatBuildings.com



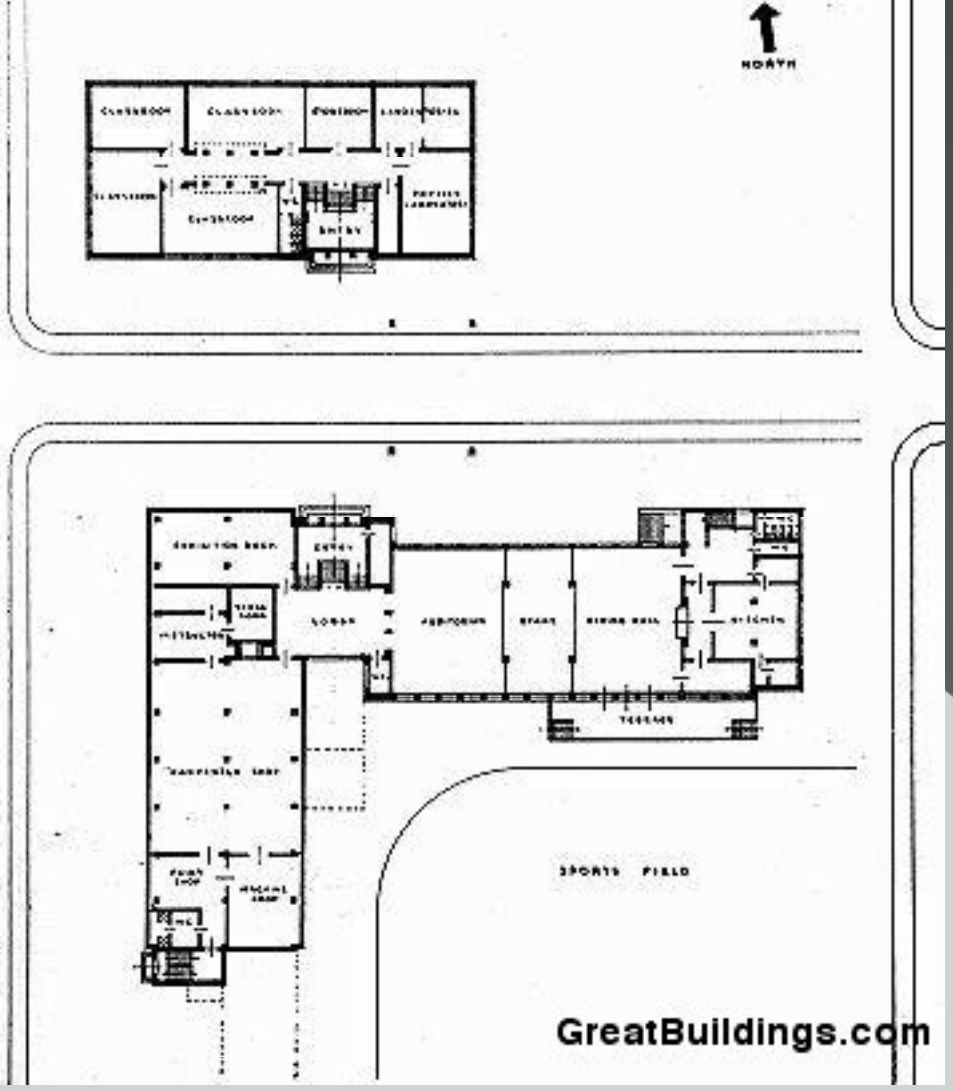

VILLA SAVOYE
LE CORBUSIER
1929
www.GreatBuildings.com

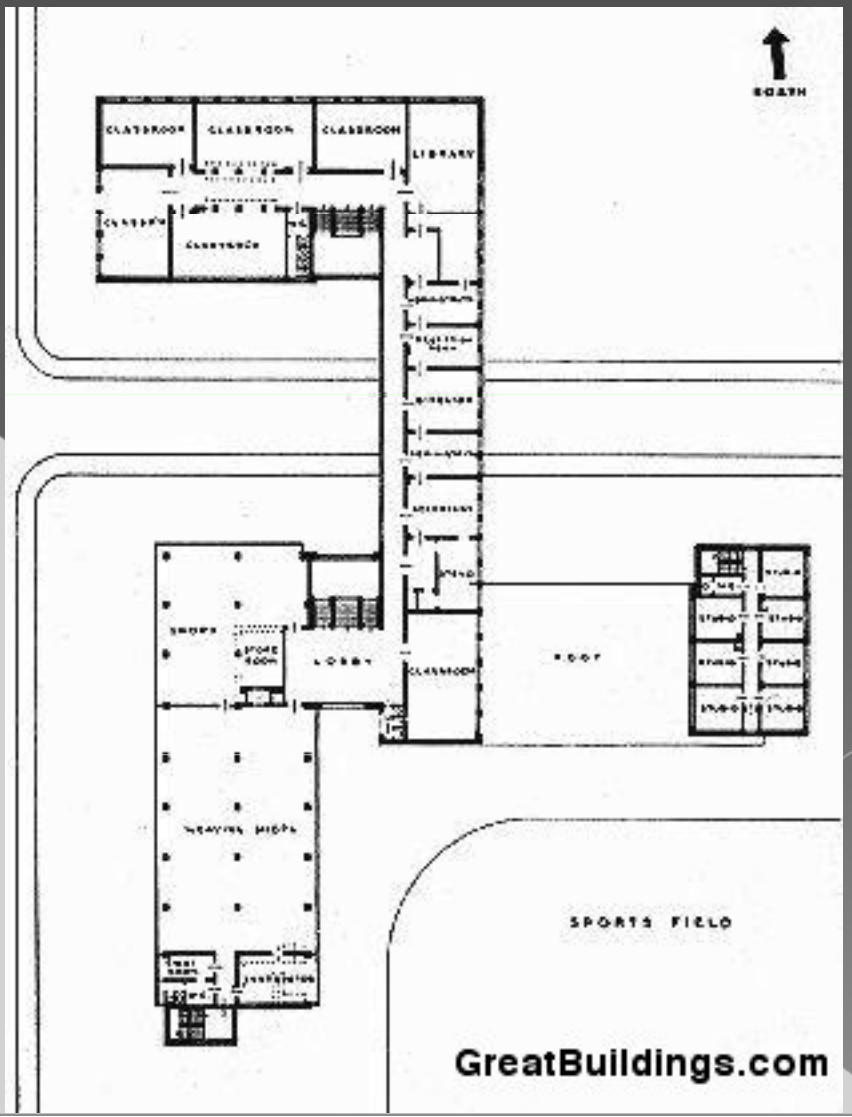

GreatBuildings.com


GreatBuildings.com


GreatBuildings.com


BAUHAUS
BAUHAUS
WALTER GROPIUS
1925
www.GreatBuildings.com

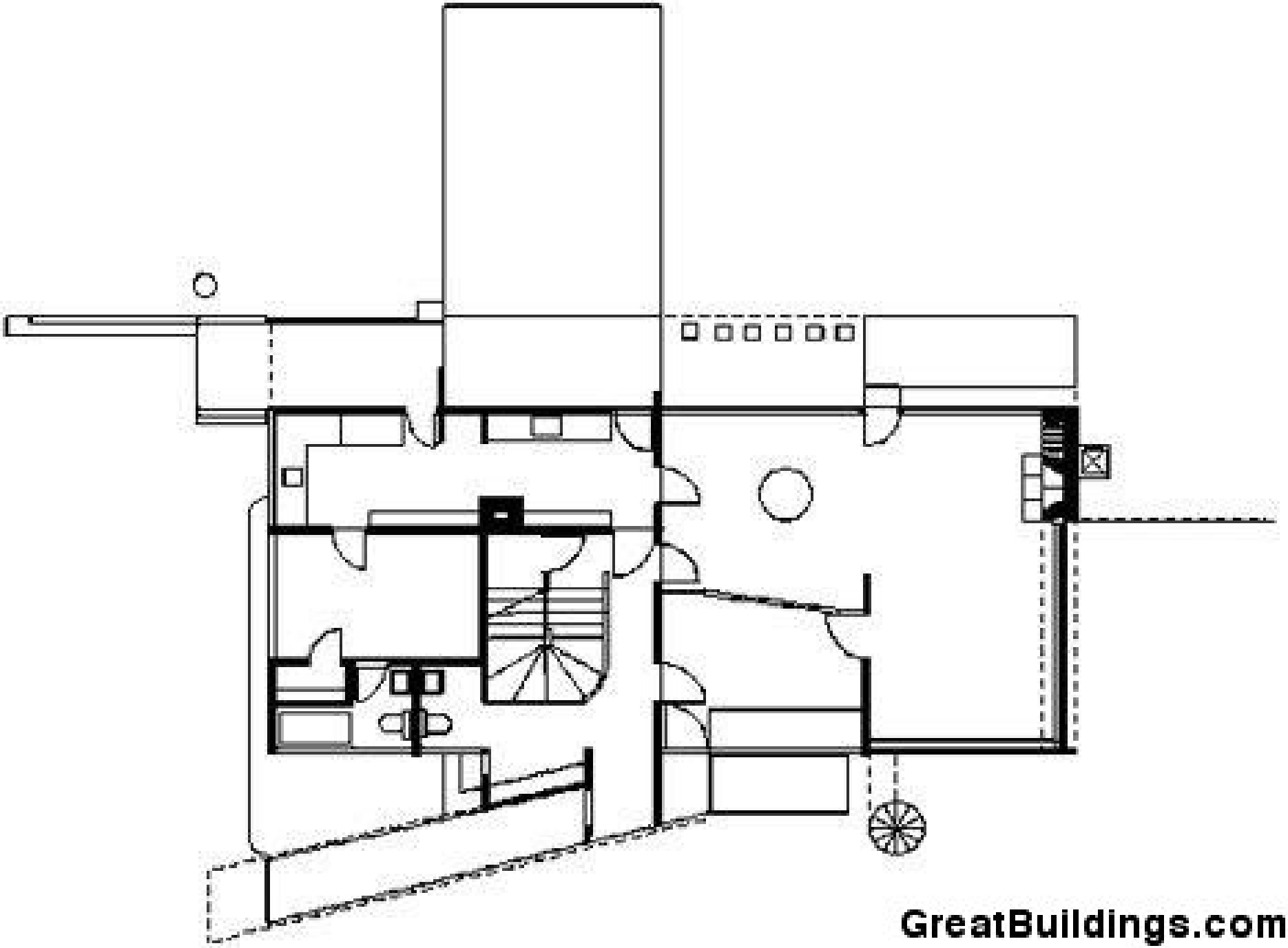

NORTH
SPORTS FIELD
GreatBuildings.com

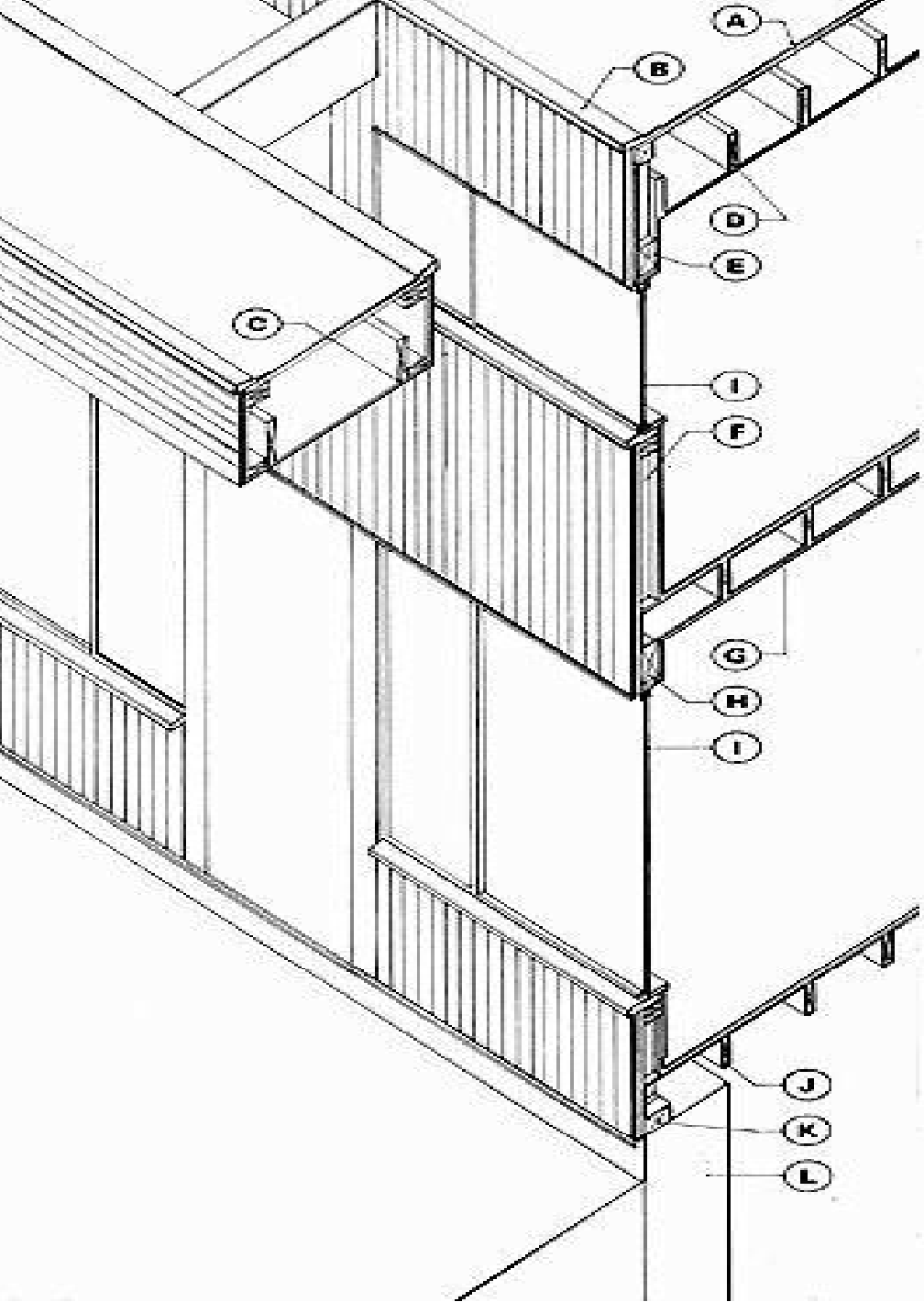

NORTH
CLASSROOM
CLASSROOM
CLASSROOM
LIBRARY
LOBBY
SHOPS
STORE ROOM
CLASSROOM
ROOF
SPORTS FIELD
GreatBuildings.com

GROPIUS HOUSE

WALTER GROPIUS

1937





A Roof construction: five-ply built-up roof with gravel on ⅞" boarding, sloped ¼" per foot.

B Gravel stop: 16-ounce lead-coated copper with 2 × 4 wood nailer. This covers the joint between the built-up roof and the wood siding while holding down the edge of the roofing.

C Vermiculite plaster soffit (later replaced with cement plaster).

D 2 × 10 fir or spruce roof joists, 16" on center.

E 4 × 8 fir or spruce beam supporting wood studs over window opening. (This is not a load-bearing wall, as the joists span between the perpendicular cross-walls.)

F Wall construction: vertical tongue-and-groove redwood siding with V joints; building paper; sheathing; 2 × 4 wood studs; plaster on metal lath for interior finish; 3" fiberglass insulation in voids.

G Floor construction: 2 × 10 joists, 16" on center; ⅞" wood subfloor, carpet floors and plaster ceilings.

H 4 × 8 fir or spruce beam.

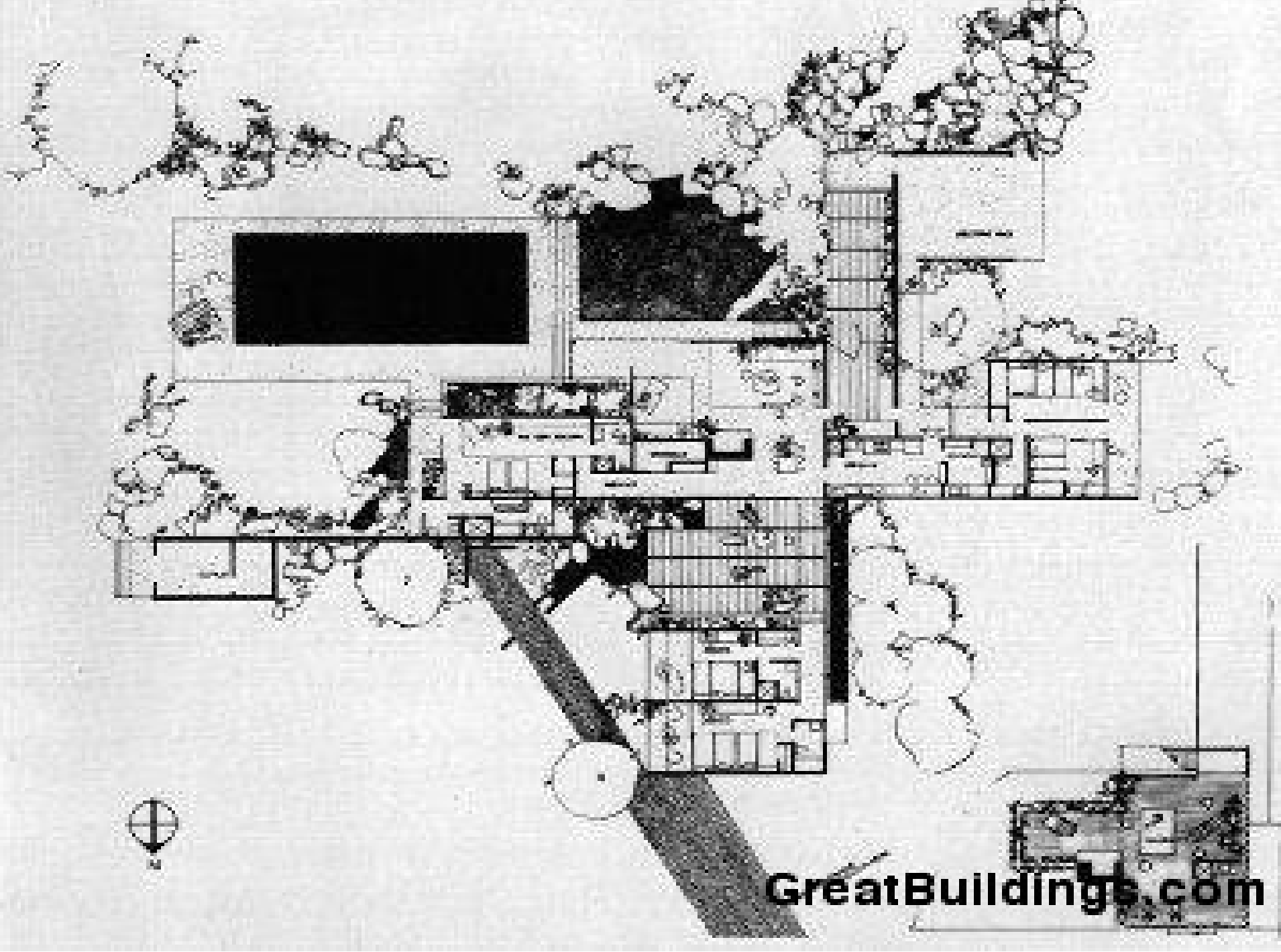
I Steel casement window.

J Floor construction: 2 × 10 fir or spruce joists, 16" on center.

K 4 × 6 mudsill and termite shield.

L Fieldstone foundation wall.

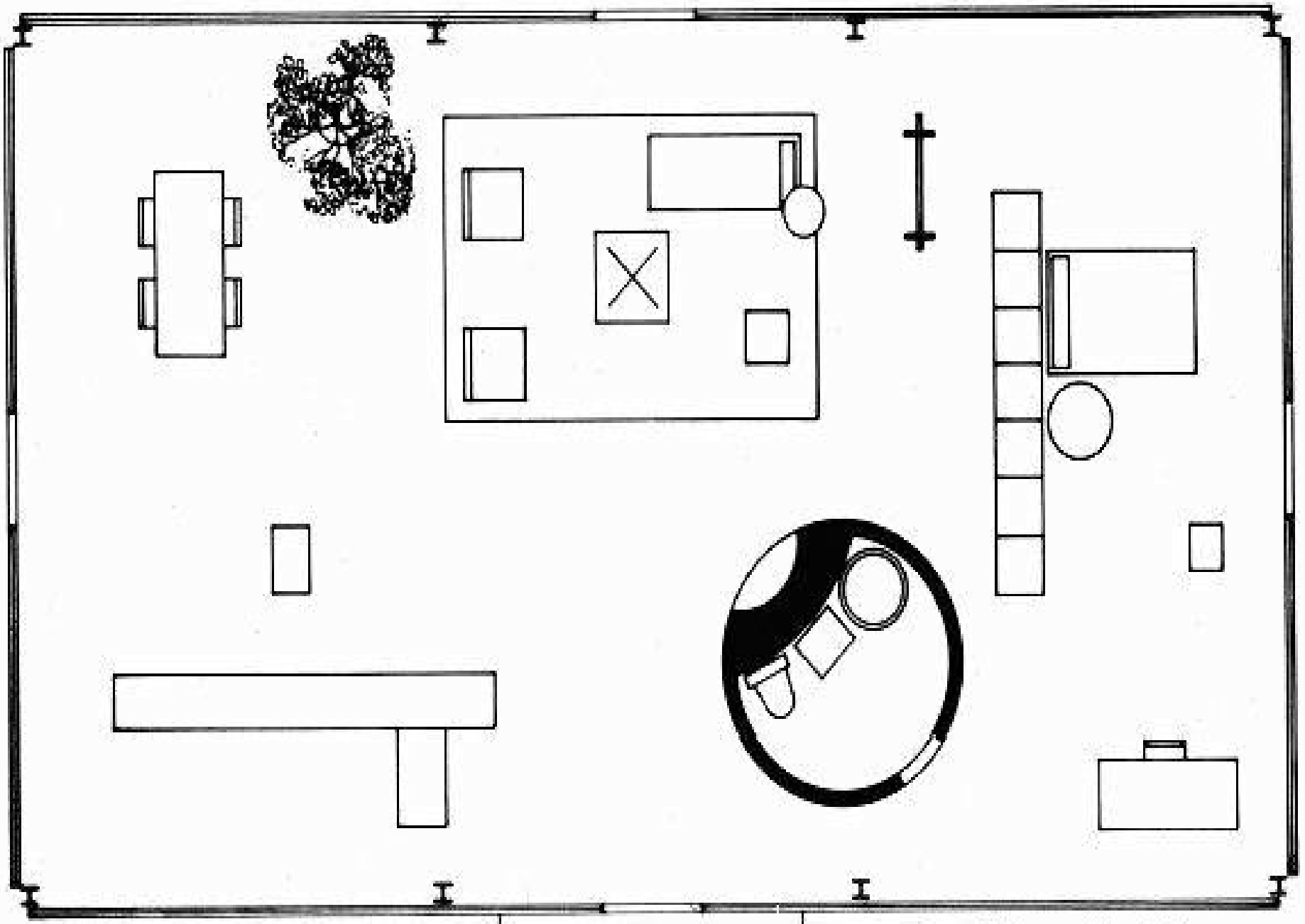

KAUFMANN DESERT HOUSE
WALTER GROPIUS
1946
www.GreatBuildings.com


GreatBuildings.com

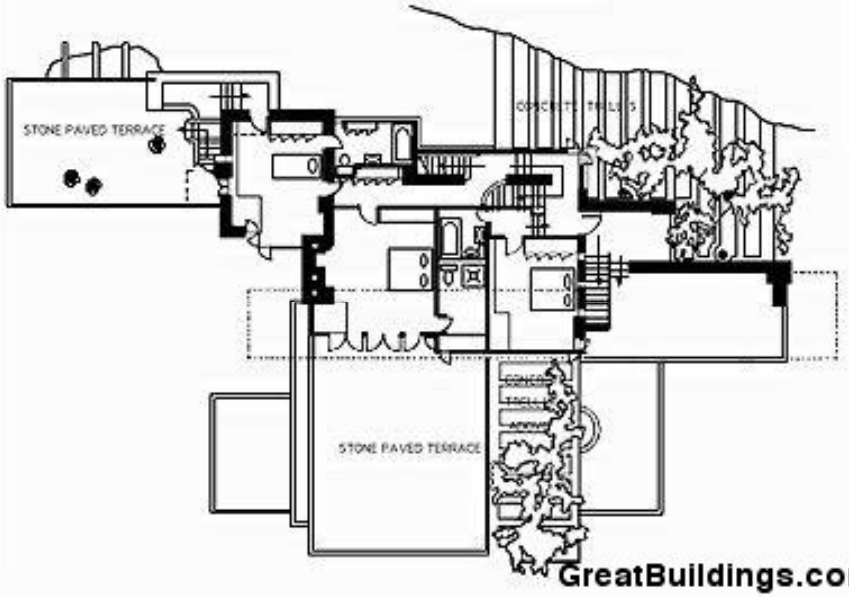
GLASS HOUSE

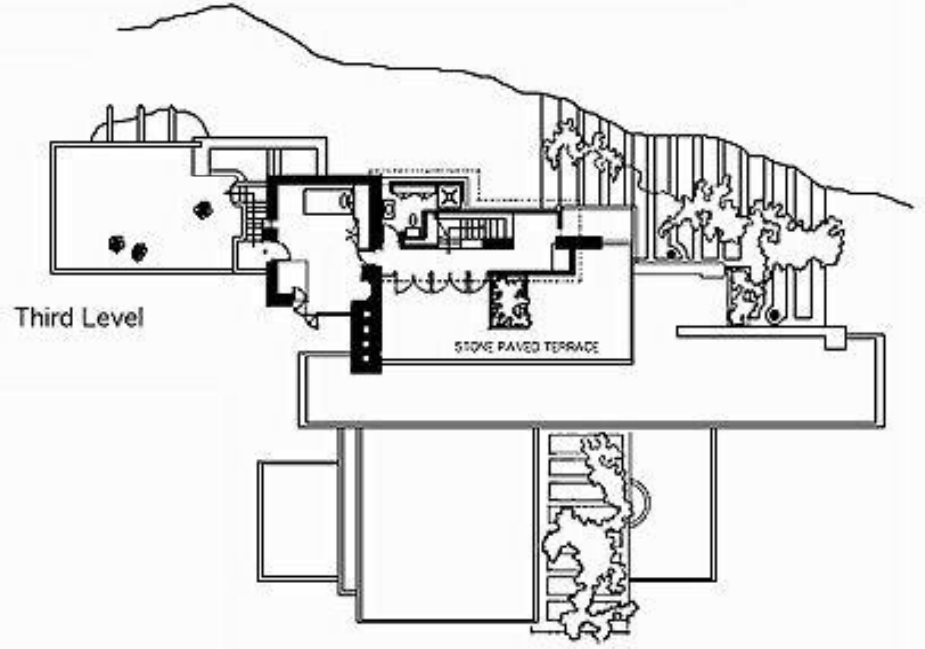
PHILIP JHONSON

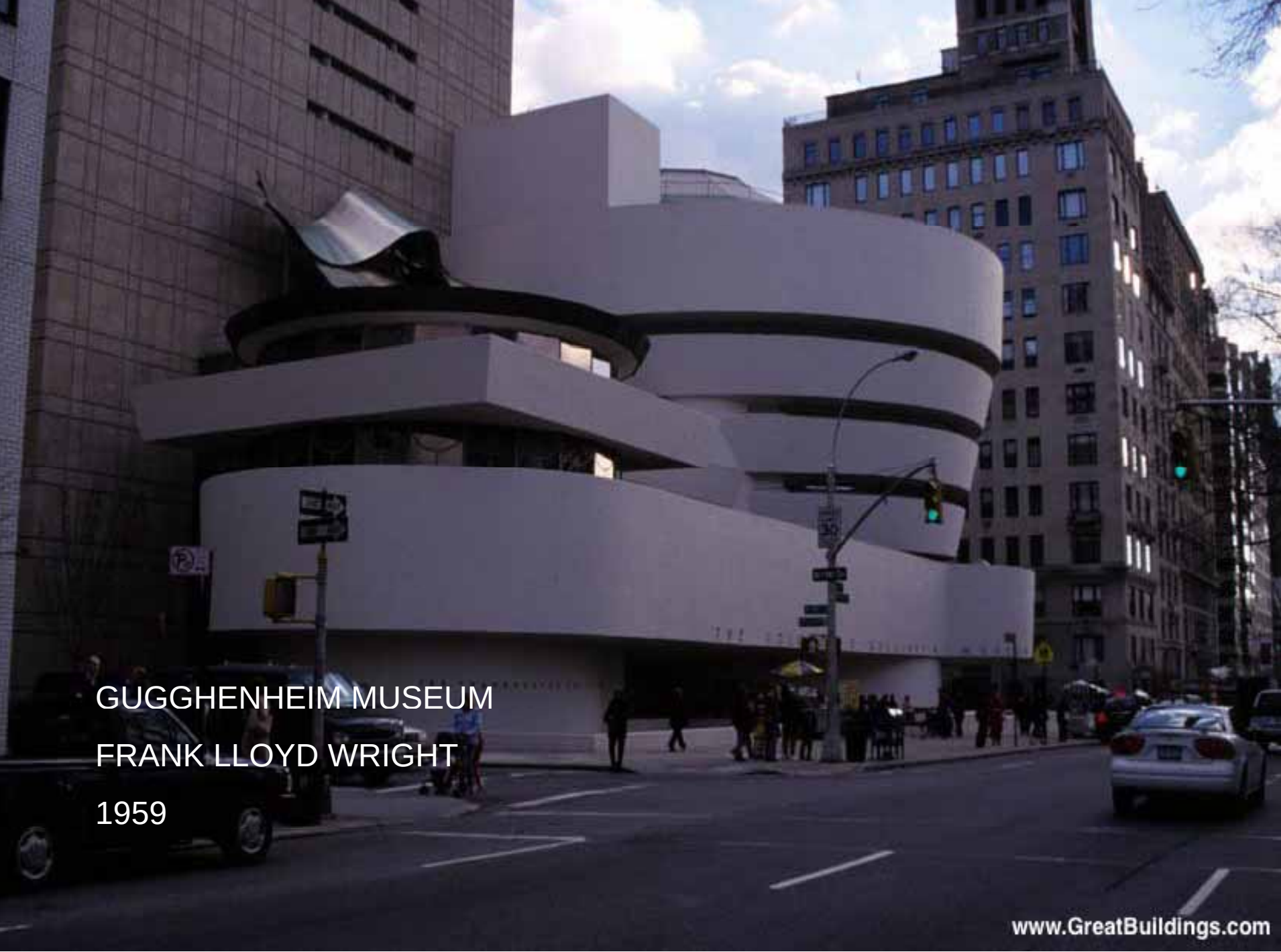
1949



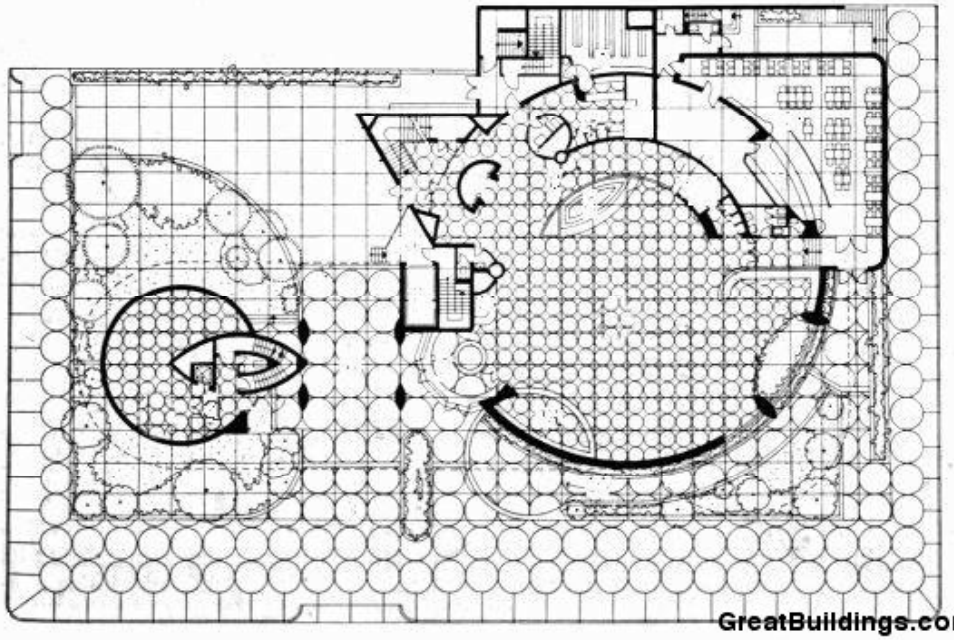

CASA DE LA CASCADA
FRANK LLOYD WRIGHT
1939

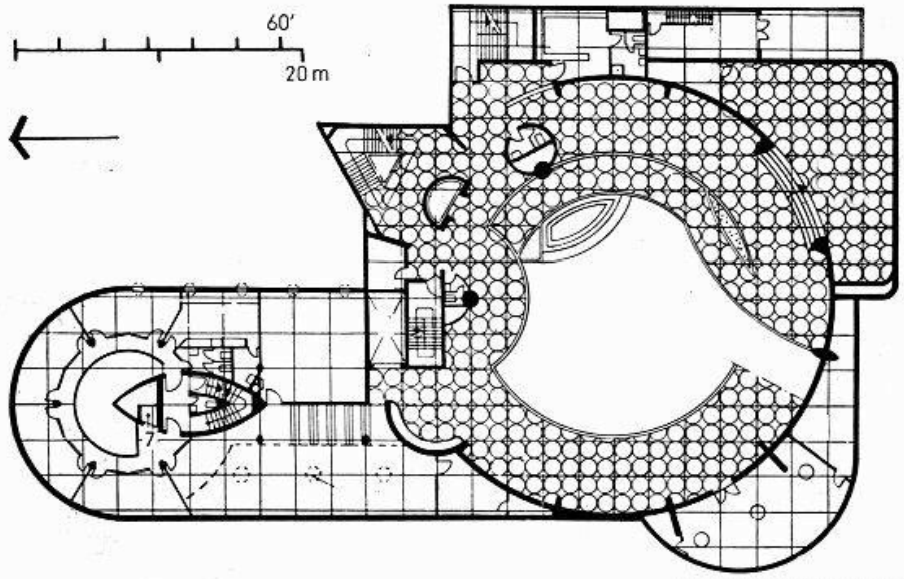


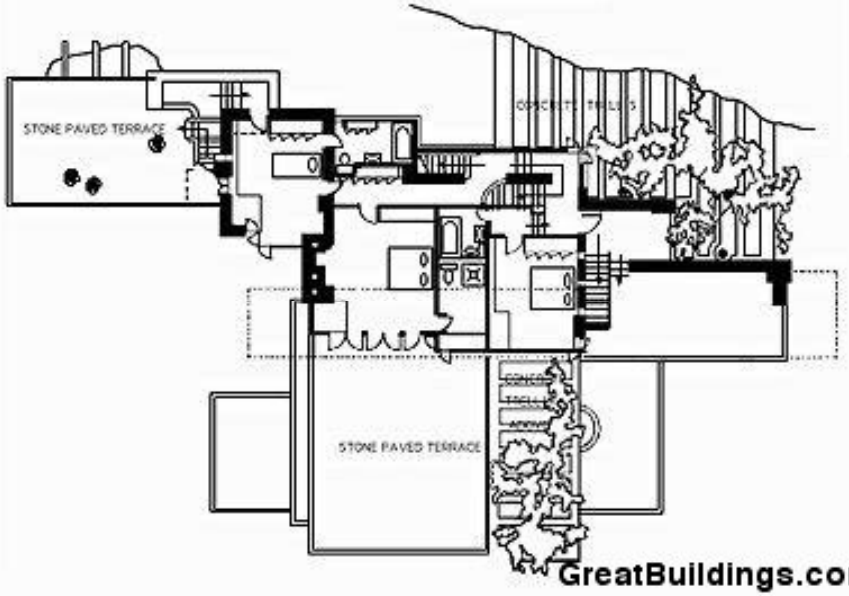


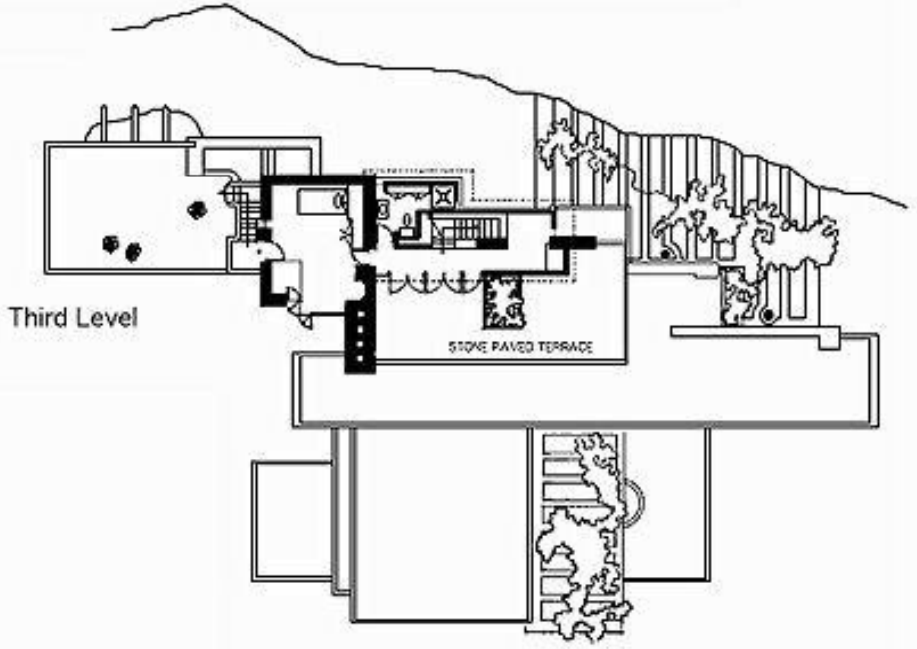

GUGGHENHEIM MUSEUM
FRANK LLOYD WRIGHT
1959
www.GreatBuildings.com

Plan, ground floor

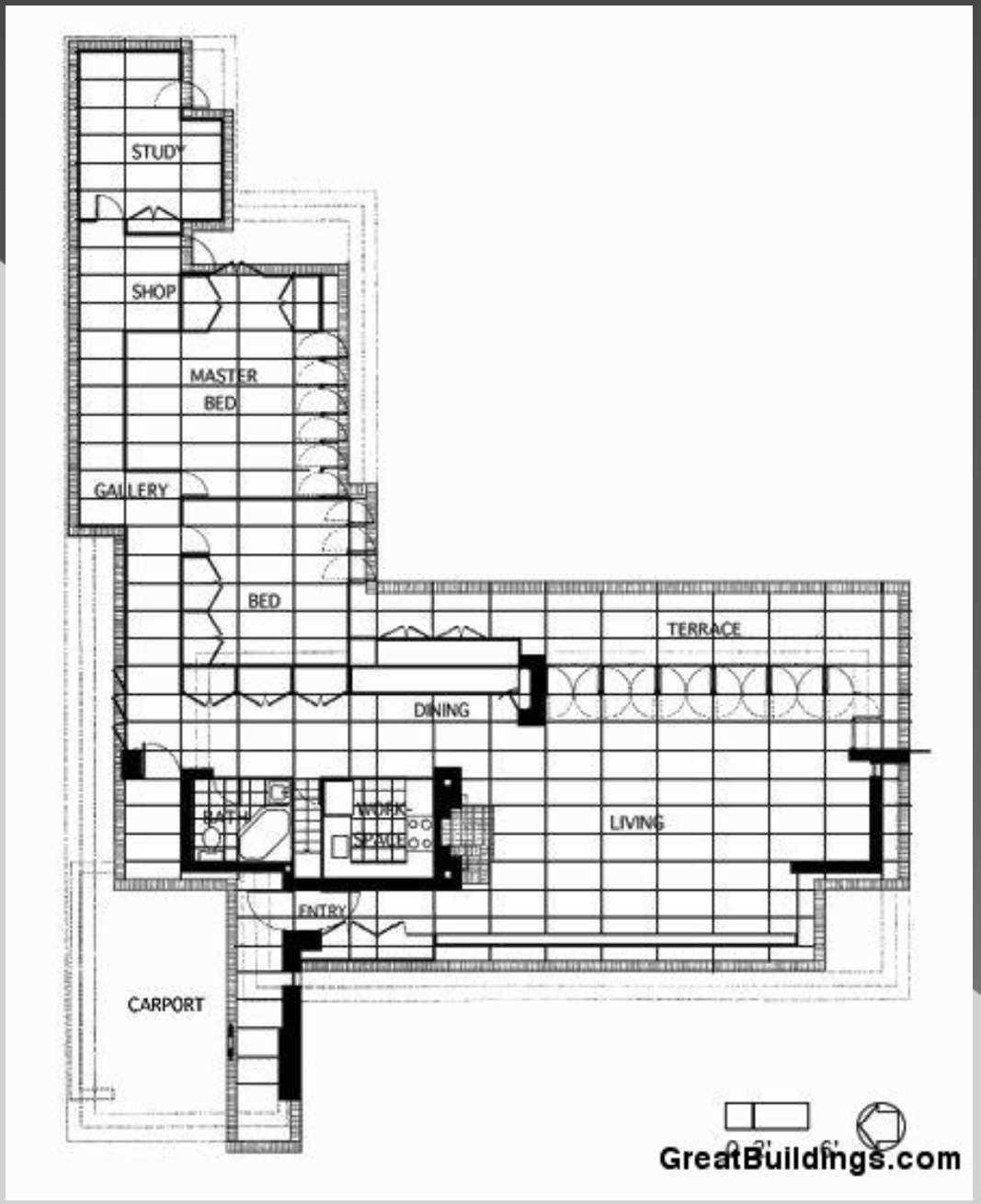




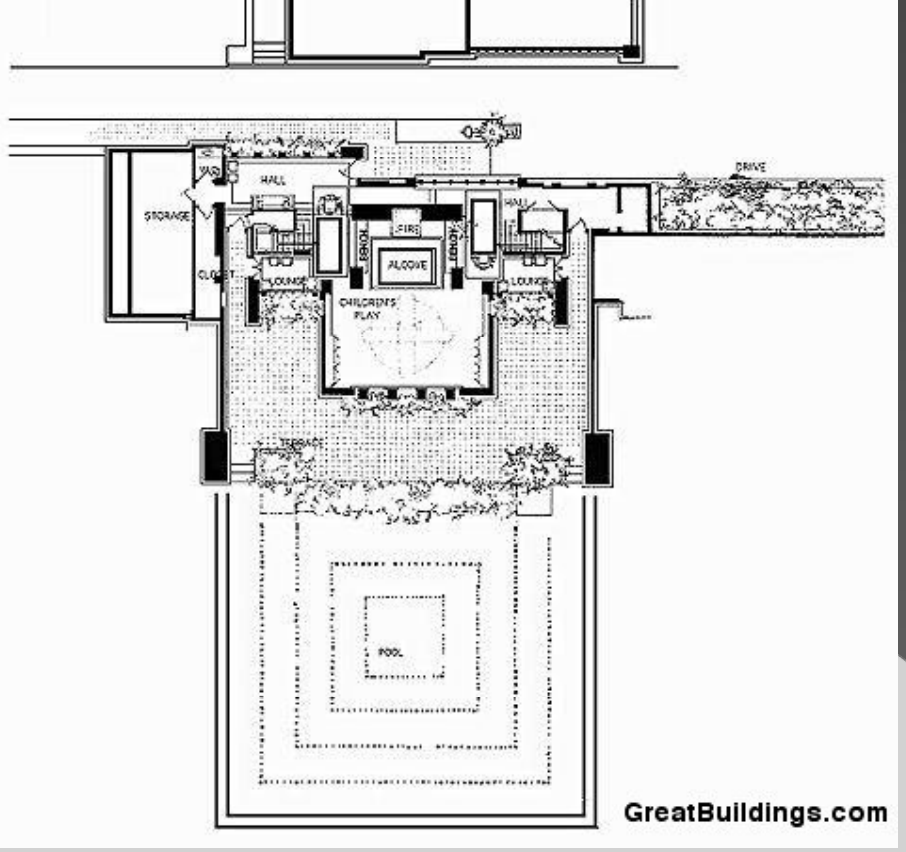


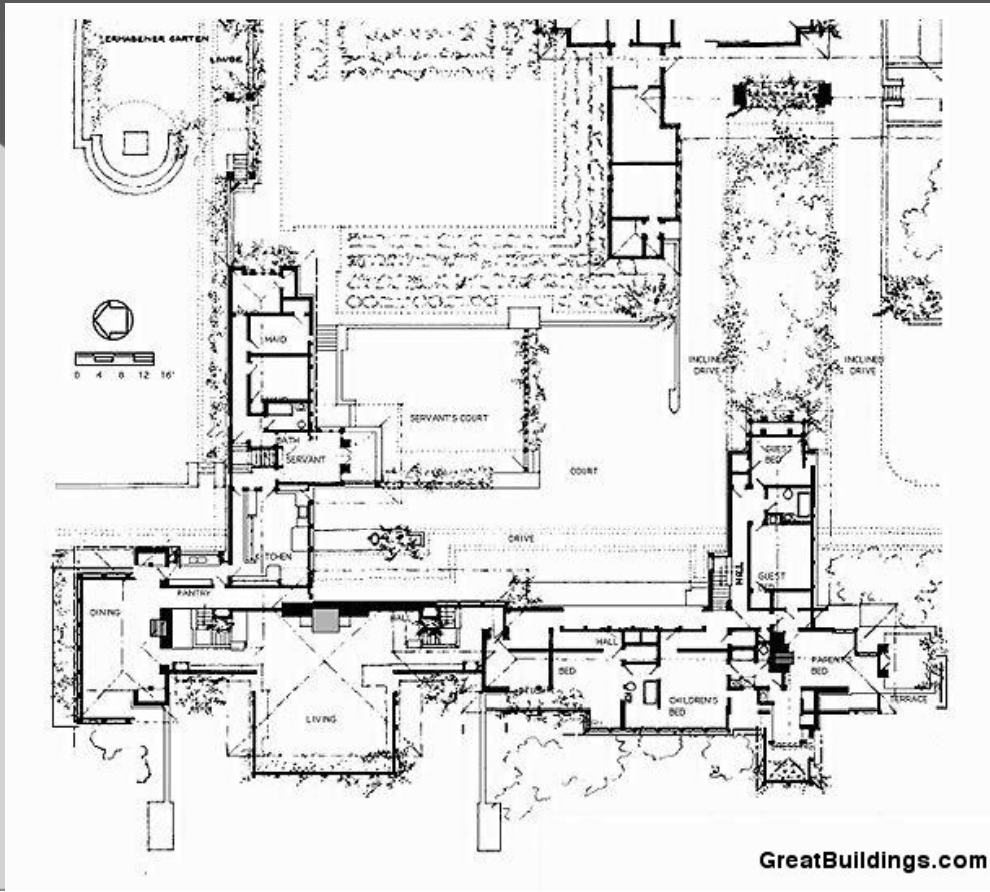



CASA JACOBS
FRANK LLOYD WRIGHT
1936
www.GreatBuildings.co

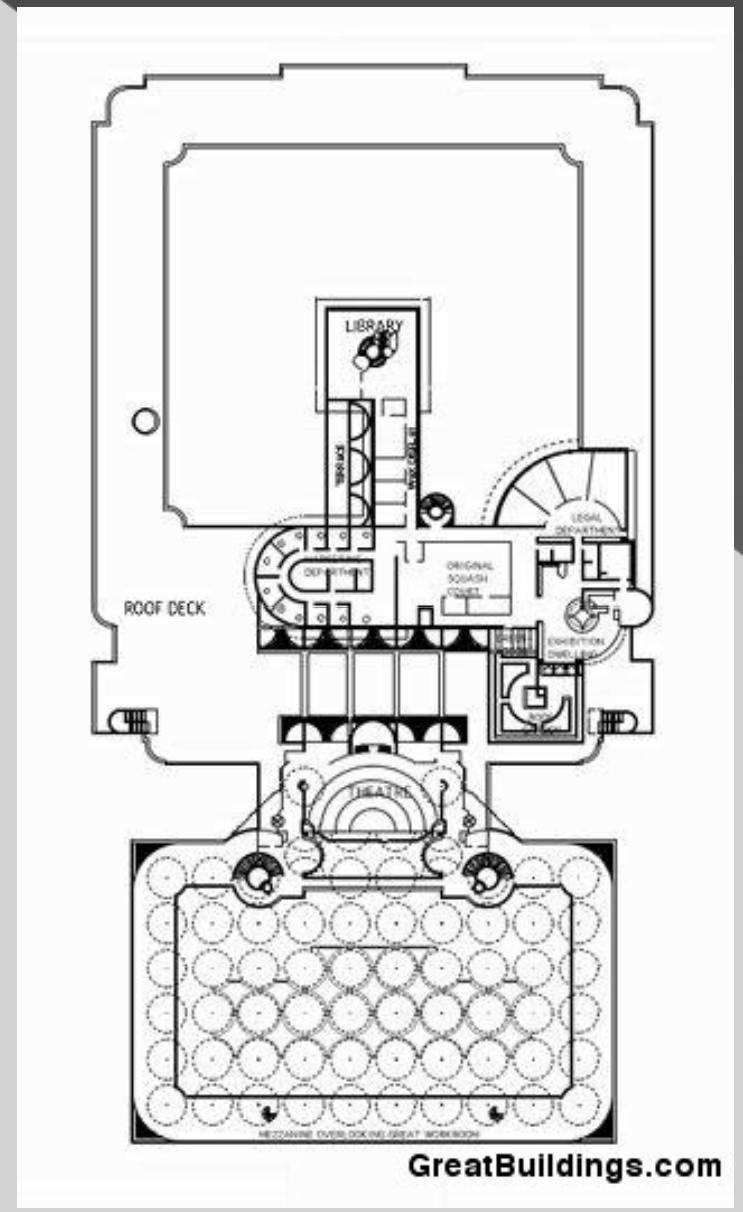

STUDY
SHOP
MASTER
BED
GALLERY
BED
TERRACE
DINING
BATH
WORK
SPACE
LIVING
ENTRY
CARPORT
GreatBuildings.com

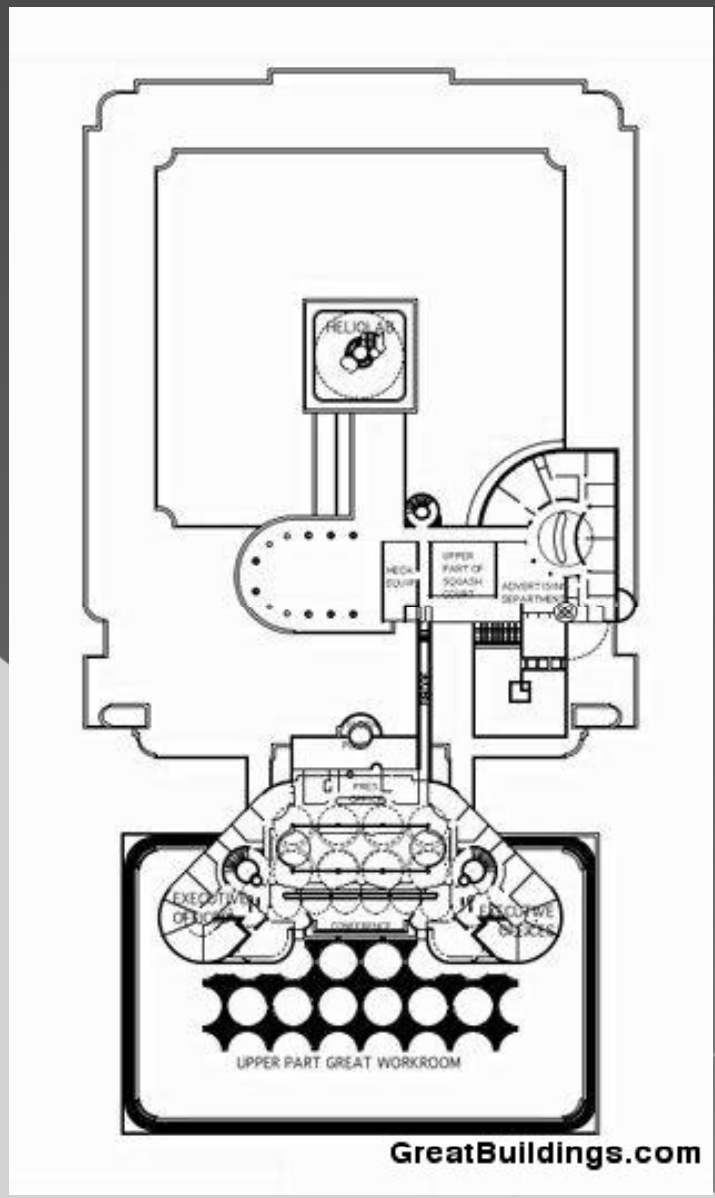

COONLEY HOUSE
FRANK LLOYD WRIGHT
1908
www.GreatBuildings.co

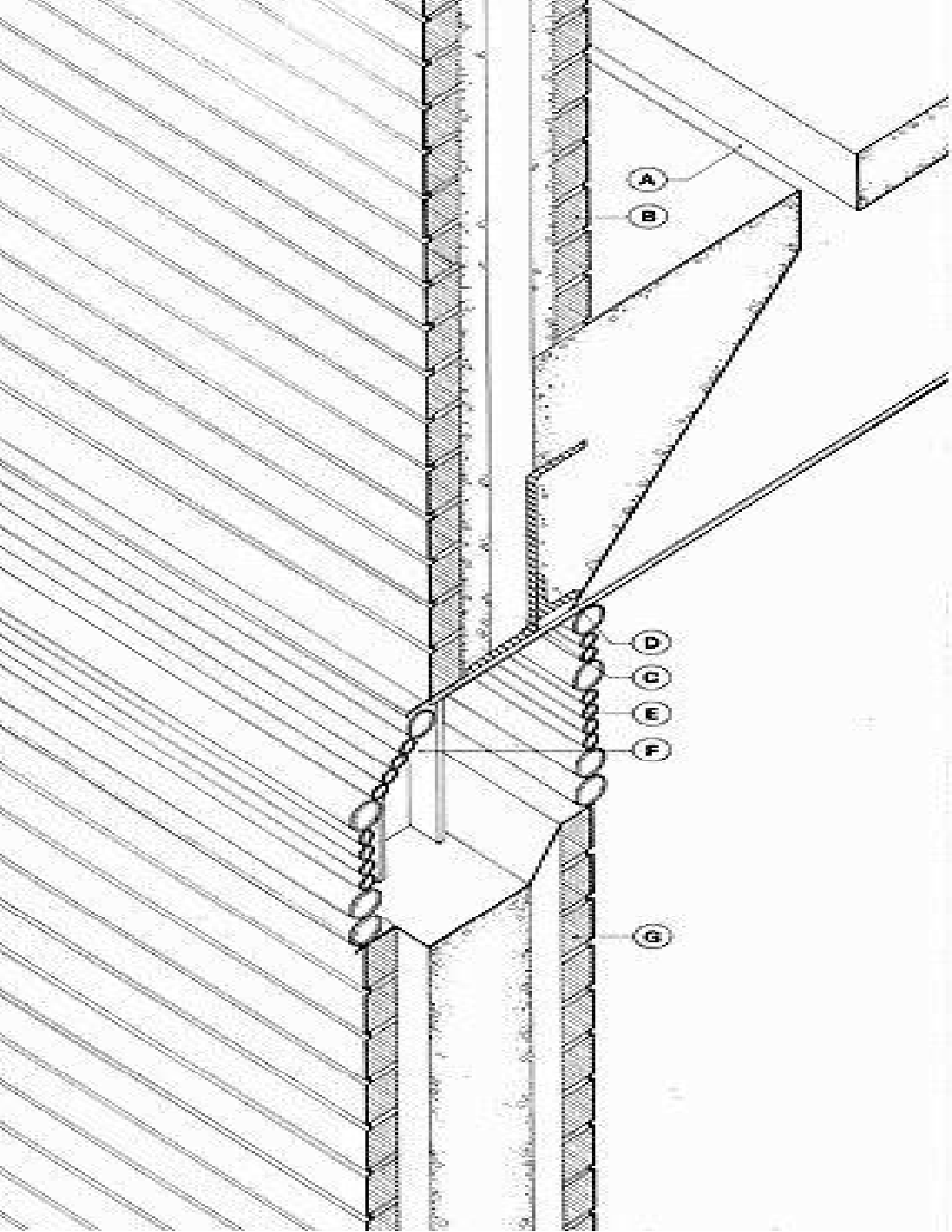

HALL
STORAGE
CLOSET
LOUNGE
FIRE
ALCOVE
CHILDREN'S PLAY
DRIVE
TERRACE
POOL
GreatBuildings.com


MAID
SERVANT'S COURT
SERVANT
COURT
DRIVE
KITCHEN
PANTRY
DINING
LIVING
HALL
BED
CHILDREN'S BED
GUEST BED
GUEST
PARENT BED
TERRACE
INCLINED DRIVE
GreatBuildings.com


JOHNSON WAX BUILDING
FRANK LLOYD WRIGHT
1944
www.GreatBuildings.com


LIBRARY
ROOF DECK
LEGAL DEPARTMENT
ORIGINAL SQUASH COURT
EXHIBITION
HEATH
GreatBuildings.com


HELICLAIR
UPPER PART OF SQUASH COURTS
ADVERTISING DEPARTMENT
UPPER PART GREAT WORKROOM
GreatBuildings.com



A Concrete floor slab with slot for air distribution.

B Upper wall construction. A layer of brick on each face forms a cavity, which is then filled with cork boards and then concrete with reinforcing on either side.

C Structural steel Z and angle. This is supported by a steel column (not shown in the drawing).

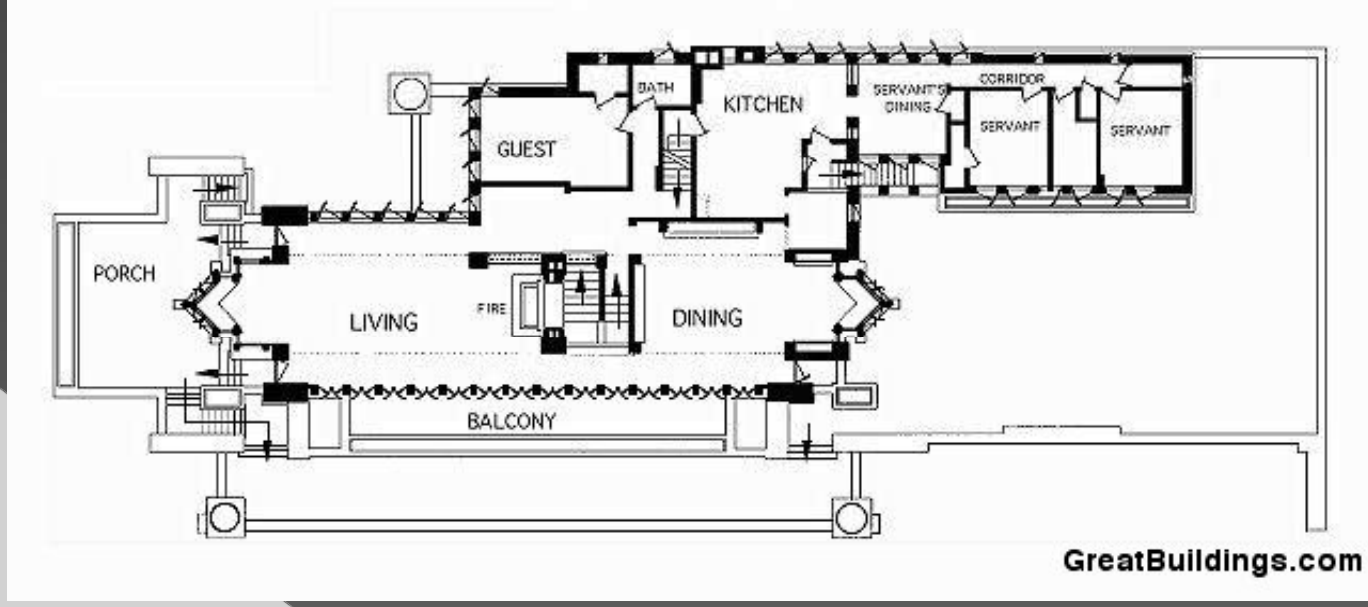
D Plaster ceiling. The space between the concrete slab and the plaster ceiling is used for air distribution.

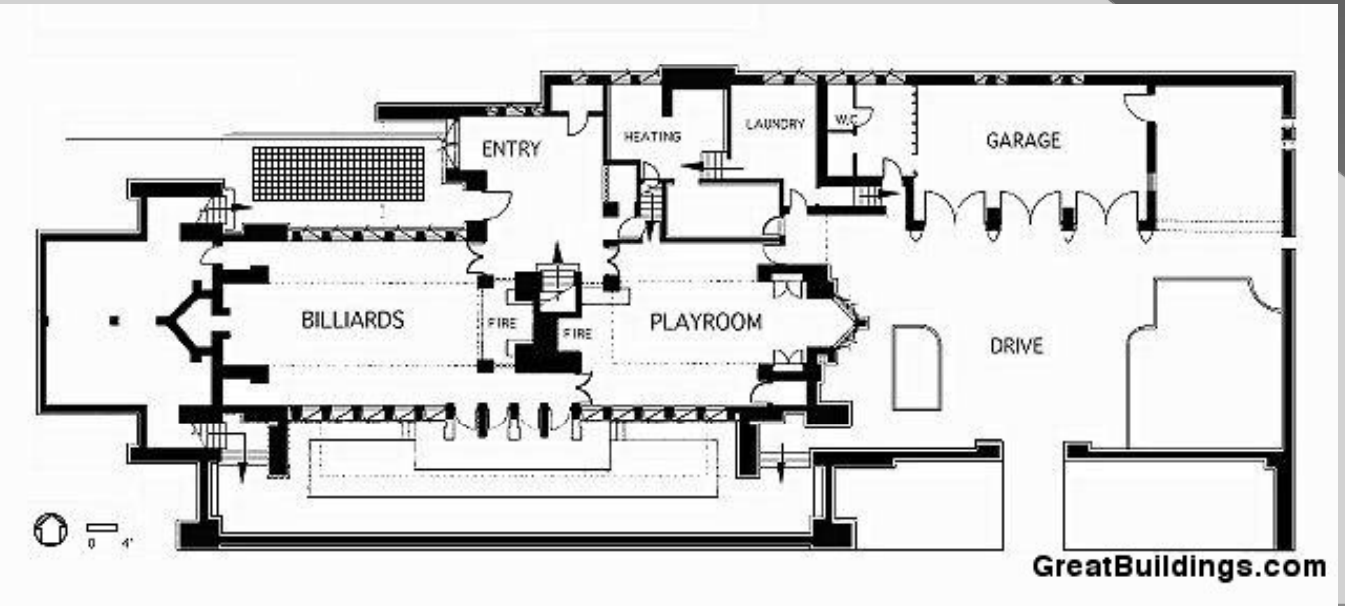
E Pyrex glass tubing.

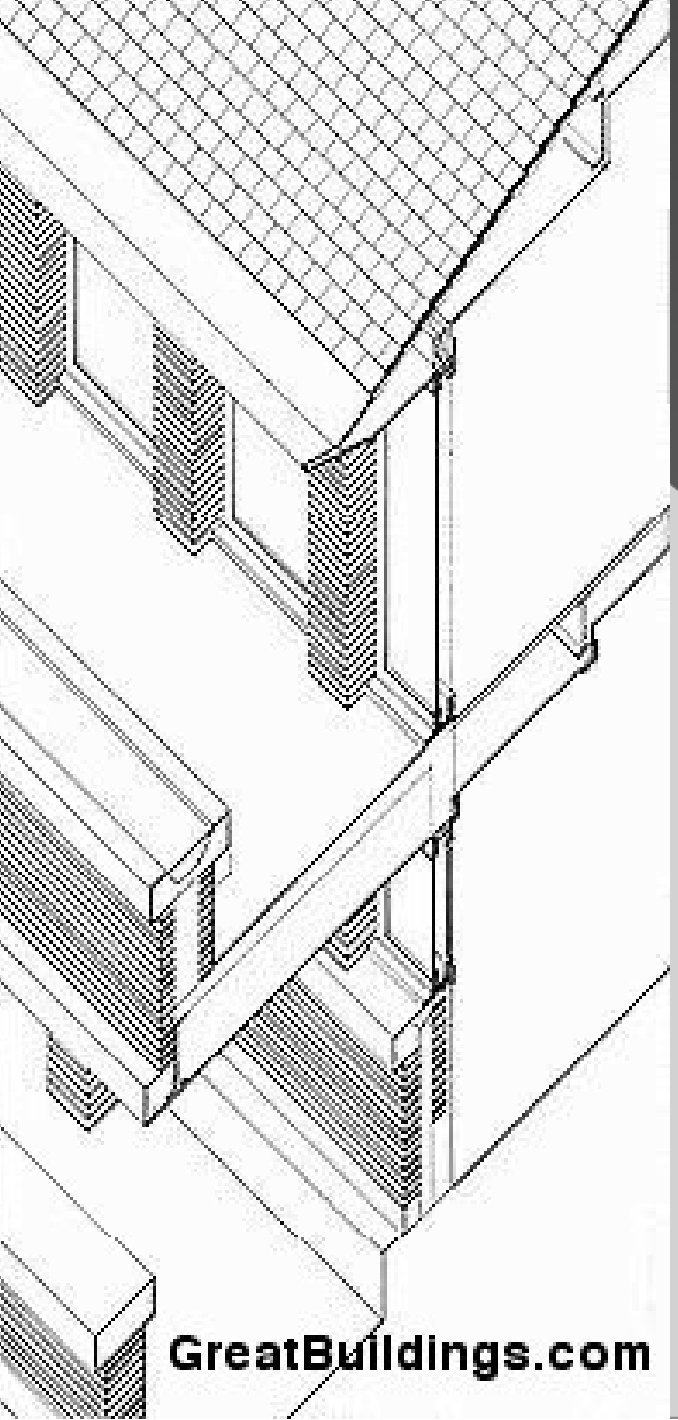
F Cast-aluminum rack to hold glass tubes.

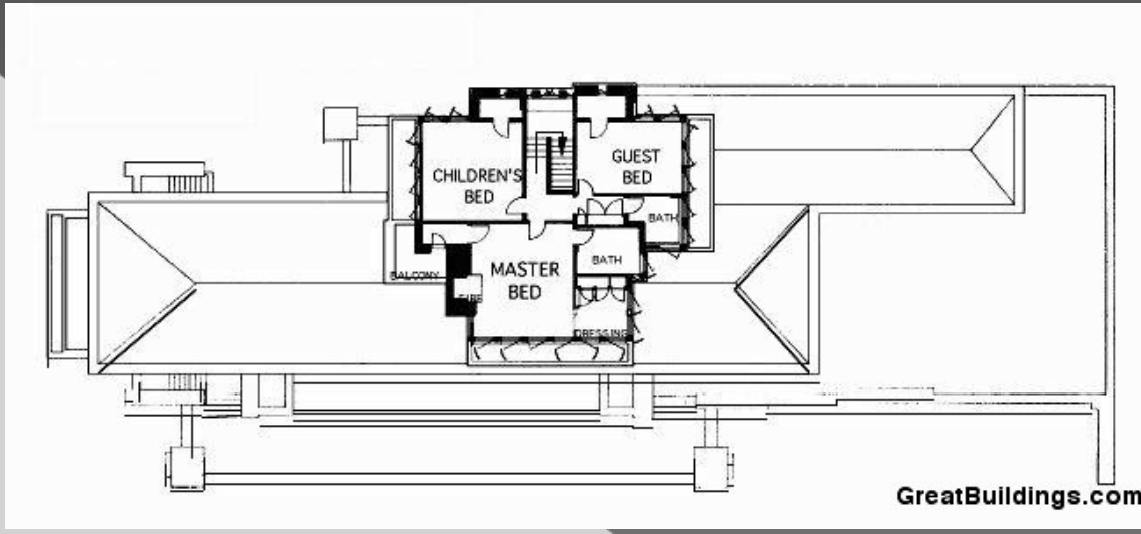
G Lower wall construction. The cork layer here is separated by a concrete wall.


ROBIE RESIDENCE
FRANK LLOYD WRIGHT
1909
www.GreatBuildings.com


BATH
KITCHEN
SERVANT'S DINING
CORRIDOR
SERVANT
SERVANT
GUEST
PORCH
LIVING
FIRE
DINING
BALCONY
GreatBuildings.com


ENTRY
HEATING
LAUNDRY
W.C.
GARAGE
BILLIARDS
FIRE
FIRE
PLAYROOM
DRIVE
GreatBuildings.com


GreatBuildings.com


CHILDREN'S BED
GUEST BED
BATH
BATH
MASTER BED
BALCONY
DRESSING
GreatBuildings.com

4. COMPARACIÓN A LO CONTEMPORANEO

FRANSWORTH HOUSE

MIES VAN DER ROHE

1946

BELVEDERE

ALBERTO CAMPO BAEZA

2000

BIBLIOTHECA ALEXANDRINA

SNOHETTA

2001

JOHNSON WAX BUILDING
FRANK LLOYD WRIGHT
1944

CASA JACOBS
FRANK LLOYD WRIGHT
1936

CERAMICS PARK MINO

ARATA ISOZAKI

2002

PABELLON DE BERLÍN

MIES VAN DER ROHE

FORUM ART PLACE BIEL

COOP HIMMELB (L) AV

2002

GREAT BAMBOO WALL

KENGO KUMA

2002

CASA DE LA CASCADA

FRANK LLOYD WRIGHT

1939

HOUSE IN THE ROCKY MOUNTAINS

ALEXANDER GORLIN

2001

CASA DE LA CASCADA

FRANK LLOYD WRIGHT

1939

KOEHLER HOUSE

JULIE SNOW ARCHITECTS

CASA DE LA CASCADA

FRANK LLOYD WRIGHT

1939

MEYER EN VAN SCHOOTEN

FNG GROUP HEADQUARTERS

2002

VILLA SAVOYE

LE CORBUSIER

1929

ROBIE RESIDENCE
FRANK LLOYD WRIGHT
1909

NORDDEUTSCHE LANDESBANK

BEHNISCH, BEHNISCH & PARTNER

2002

REIHOKU COMMUNITY HALL

HITOSHI ABE

2002

NOTRE DAME DU HAUT

LE CORBUSIER

1955

SERPENTINE GALLERY PAVILION

OSCAR NIEMEYER

2003

FRANSWORTH HOUSE

MIES VAN DER ROHE

1946