

EXPERIMENT AND TRADITION: A BUILDER'S THOUGHTS

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THESIS SUBMITTED TO THE FACULTY OF VIRGINIA POLYTECHNIC INSTITUTE
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ACKNOWLEDGEMENTS:

TO MY COMMITTEE:
FOR YOUR ADVICE, SUPPORT AND DESIRE FOR EXCELLENCE.

TO DIANE:
FOR YOUR UNCONDITIONAL LOVE AND SUPPORT AND FOR YOUR CHARACTER AND INTEGRITY WHICH ARE A CONSTANT SOURCE OF INSPIRATION.

TO CHRISTOPHER:
FOR YOUR LOVE, ENTHUSIASM AND YOUTHFUL EXUBERANCE.

TO MOM:
FOR YOUR LOVE, SACRIFICE AND HARD WORK. THANK YOU.

TO JOE AND LYNN:
FOR YOUR LOVE, PATIENCE AND UNDERSTANDING. WITHOUT YOU THIS WOULD NOT HAVE BEEN POSSIBLE.

TO CARLOS:
FOR YOUR FRIENDSHIP AND IDEALISM.

TO ROB:
WHEREVER YOU MAY BE.



ABSTRACT:

THE FOLLOWING THESIS HAS ATTEMPTED TO INVESTIGATE THE POSSIBILITIES OF AN ARCHITECTURE BASED IN TRADITION AND IN INNOVATION. AN ARCHITECTURE THAT NEITHER IMITATES NOR MIMICS, BUT ONE THAT RESULTS FROM CONSTRUCTION AND THE NATURE OF MATERIALS USED RATHER THAN FROM THE APPLICATION OF DECORATIVE ELEMENTS TO DISGUISE THE STRUCTURE OF THE BUILDING. THE SUCCESS OF A PROJECT RESULTS FROM THE ARCHITECT'S CONCEPTUAL UNDERSTANDING OF THE TRADITIONS OF THE REGION IN WHICH THE PROJECT EXISTS, INFORMED BY LOCAL TRADITIONS YET NOT ILLUSTRATING A REVIVALIST FORM OF VERNACULAR CONSTRUCTION.

INTRODUCTION:

"DESPITE THE FACT THAT NOT MANY SQUARE METERS ARE BUILT IN DENMARK, THE WILL TO EXPERIMENT AND CARRY OUT QUALITATIVE IMPROVEMENTS IS MINIMAL. TECHNOCRACY AND BUREAUCRACY WEIGH HEAVILY ON THE BUILDING TRADE, AND THE VARIOUS INTERESTS ZEALOUSLY WATCH OVER EACH OTHER, GRABBING AS MUCH OF THE PIE AS POSSIBLE, A PIE THAT IS CONSTANTLY SMALLER FOR EACH YEAR THAT PASSES. THE PUBLIC REGULATIONS ARE GUARDED BY LAWYERS AND ECONOMISTS, WHOSE INSIGHT INTO PRACTICAL BUILDING IS RAPIDLY DIMINISHING, AND WHOSE AESTHETIC SENSITIVITY IS LIMITED TO NUMERICAL CALCULATIONS. THE PEOPLE WHO COMMISSION US, THE CLIENTS AND POLITICIANS, CAN'T SEE. A KIND OF IMAGE BLINDNESS PREVAILS, AND THE VISUAL AWARENESS OF MOST IS AT THE LEVEL OF A FIVE YEAR OLD. THIS CLIMATE OF QUANTITATION IS THE BASIC FRAMEWORK AROUND DANISH ARCHITECTURE TODAY. HOWEVER, THERE ARE A FEW POCKETS OF RESISTANCE REMAINING AMONG CLIENTS AND ARCHITECTS WHO STILL CLAIM THE RIGHT TO EXPERIMENT, THE RIGHT TO PUT FORTH ARTISTIC STATEMENTS AND THE RIGHT TO ALLOW ARCHITECTURE TO UNFOLD WITHIN ALL ASPECTS OF THE BUILDING TRADE."

ARKITEKTUR DK

LUCA SCACCHETTI'S WORK ILLUSTRATES AN INTELLECTUAL AND PROFESSIONAL DEDICATION TO THE FORMAL QUALITIES OF INDIGENOUS ARCHITECTURE. IN EXPLAINING HIS APPROACH, HE STATES THAT HE SEEKS TO RETRIEVE A HOMOGENEOUS ARCHITECTURAL LANGUAGE FOR NEW CONSTRUCTIONS IN THE LOMBARDIAN PLAINS AND MOUNTAINS, CAPABLE OF CONTINUING THE TRADITIONS OF THE PLACE AND THE INVESTIGATION FOR A NEW ARCHITECTURE.

THE FOLLOWING THESIS HAS ATTEMPTED TO INVESTIGATE THE POSSIBILITIES OF AN ARCHITECTURE BASED IN TRADITION AND IN INNOVATION. AN ARCHITECTURE THAT NEITHER IMITATES NOR MIMICS, BUT ONE THAT RESULTS FROM CONSTRUCTION AND THE NATURE OF MATERIALS USED RATHER THAN FROM THE APPLICATION OF DECORATIVE ELEMENTS TO DISGUISE THE STRUCTURE OF THE BUILDING. THE SUCCESS OF A PROJECT RESULTS FROM THE ARCHITECT'S CONCEPTUAL UNDERSTANDING OF THE TRADITIONS OF THE REGION IN WHICH THE PROJECT EXISTS, INFORMED BY LOCAL TRADITIONS YET NOT ILLUSTRATING A REVIVALIST FORM OF VERNACULAR CONSTRUCTION.

THE PROJECT, A LIFEBOAT STATION AND PUBLIC PIER, IS LOCATED ON THE ISLAND OF BERMUDA, AN ISOLATED GROUP OF ABOUT 150 SMALL ISLANDS IN THE WESTERN ATLANTIC OCEAN. THE PRINCIPAL ISLANDS ARE CONNECTED BY BRIDGES OR CAUSEWAYS AND ARE APPROXIMATELY 22 MILES LONG AND 2 MILES WIDE. THE CLIMATE IS GENERALLY MILD, HUMID AND FROST-FREE, COMPLIMENTS OF THE GULF STREAM WHOSE NORTHWARD FLOW BETWEEN THE UNITED STATES AND BERMUDA WARMS THE ISLANDS WATERS AND STABILIZES THE CLIMATE. THE SITE IS LOCATED ON THE FORMER UNITED STATES NAVAL AIR STATION ON ST. DAVID'S ISLAND.



"THE WORLD NEEDS DREAMERS AND THE WORLD NEEDS DOERS, BUT ABOVE ALL, THE WORLD NEEDS DREAMERS WHO DO."

Sarah Ann Breathnach



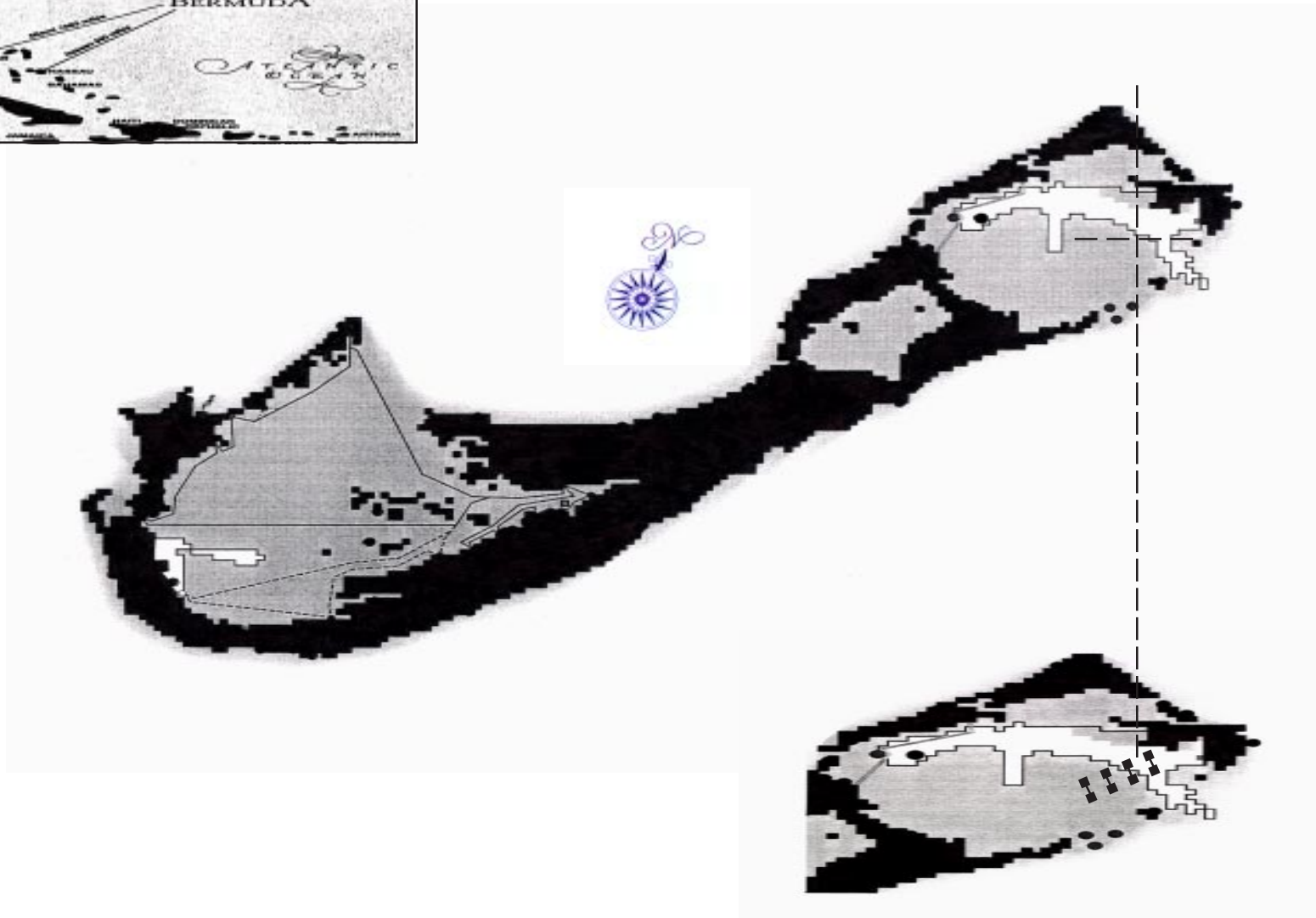


"AN ATTENTIVE STUDY OF LOCAL MATERIAL AND CONDITIONS WILL GREATLY AID US IN SECURING HARMONY AND RHYTHM, MAKING OUR BUILDING LOOK AS IF IT GREW WHERE IT STOOD IN LOVING COOPERATION WITH ITS IMMEDIATE SURROUNDINGS."

Charles F. A. Voysey



SITE:

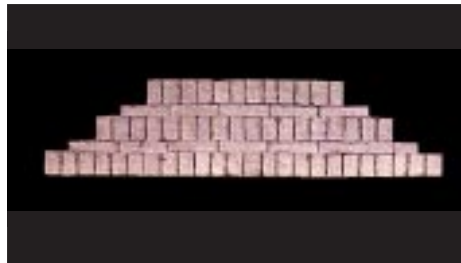


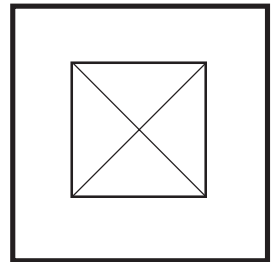
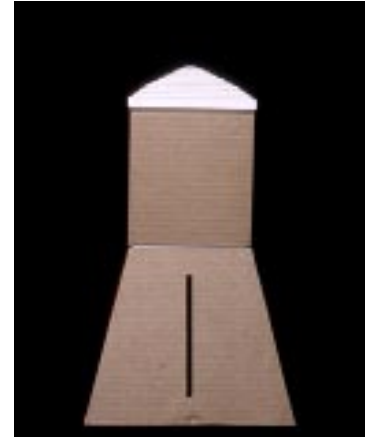
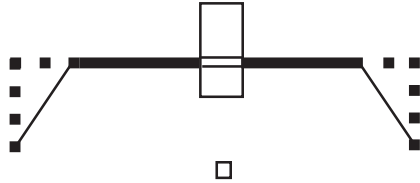
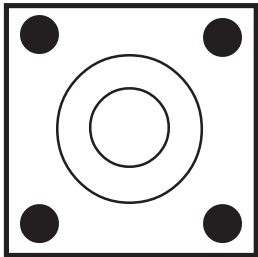
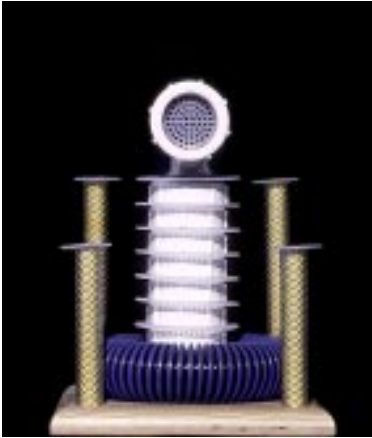
PRELIMINARY INVESTIGATION:

The Bricklayer:

I TELL THIS TALE, WHICH IS STRICTLY TRUE,
JUST BY WAY OF CONVINCING YOU.
HOW VERY LITTLE, SINCE THINGS WERE MADE,
THINGS HAVE ALTERED IN THE BUILDING TRADE.

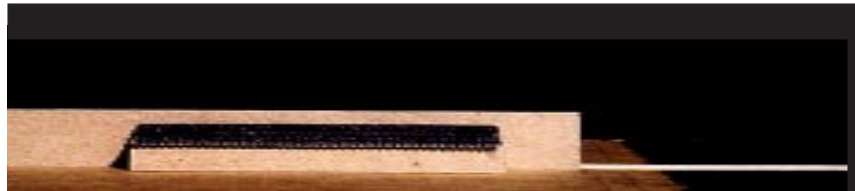
"Rudyard Kipling"





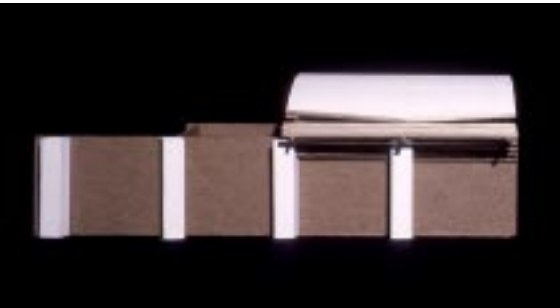
"OUT OF CLUTTER; FIND SIMPLICITY."

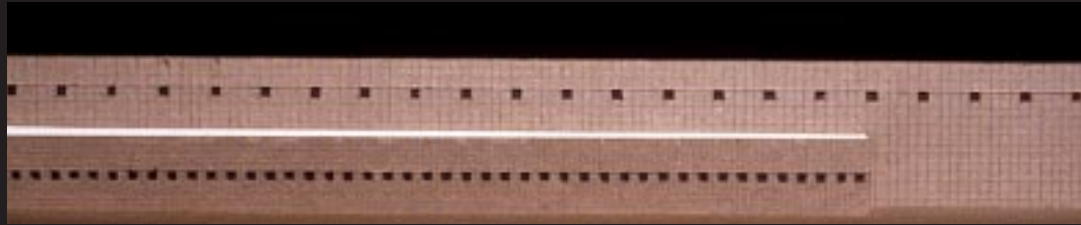
Albert Einstein





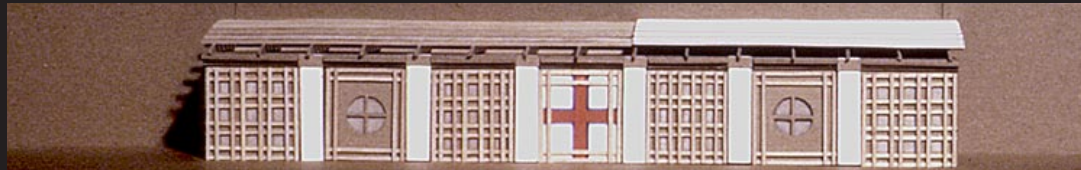
EVOLUTION . . .



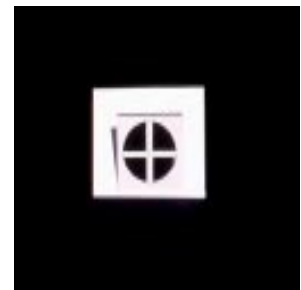
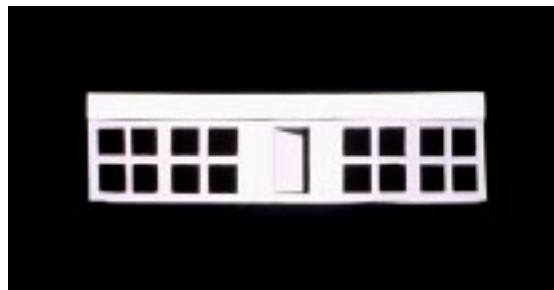
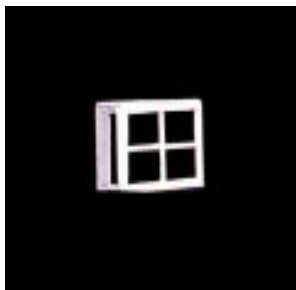
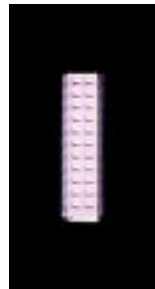
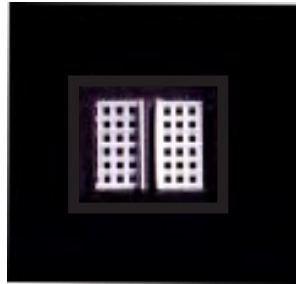


"IF WE CHALLENGE THE PAST, WE SHALL LEARN THAT STYLES NO LONGER EXIST FOR US, THAT A STYLE BELONGING TO OUR OWN PERIOD HAS COME ABOUT; AND THERE HAS BEEN A REVOLUTION."

Le Corbusier



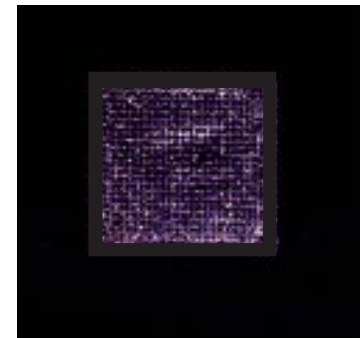
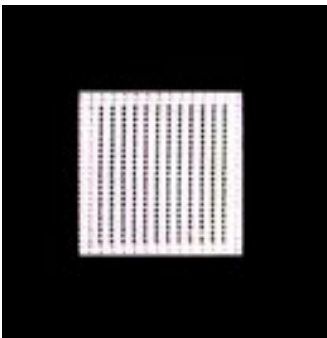
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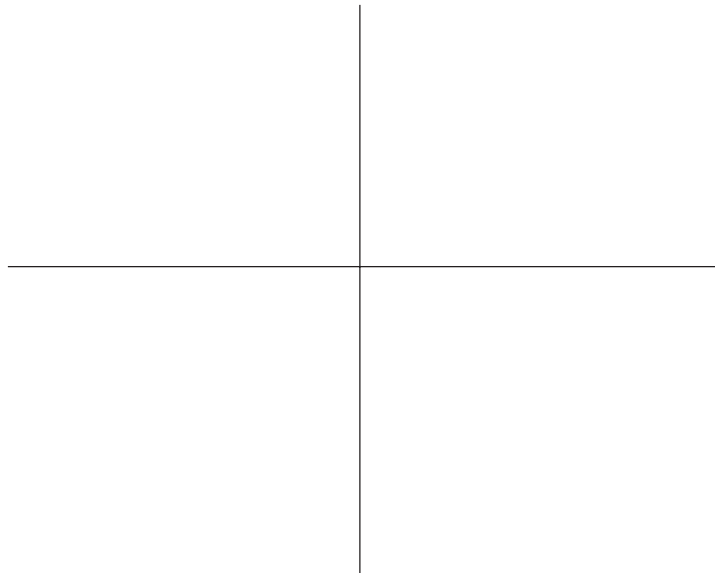
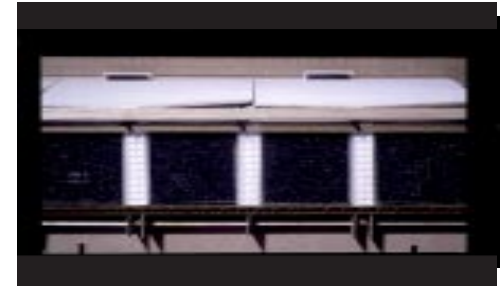




"THE FIRST AMERICAN HOUSE BUILT IN WAR-TIME JAVA COMPLETELY BEWILDERED NATIVES THERE. INSTEAD OF BUILDING WALLS OF LOCAL BAMBOO, WHICH IS CLOSELY SPACED TO KEEP OUT RAIN WHILE ADMITTING LIGHT AND AIR, THE WHITE MAN PUT UP SOLID WALLS TO KEEP OUT LIGHT AND AIR, AND THEN CUT WINDOWS IN THE WALLS TO ADMIT THE LIGHT AND AIR. NEXT, HE PUT GLASS PANES IN THE WINDOWS TO ADMIT LIGHT BUT KEEP OUT THE AIR. THEN, HE COVERED THE PANES WITH BLINDS AND CURTAINS TO KEEP OUT THE LIGHT TOO."

Ken Kerr





GLASS BLOCK COLUMNS ADMIT LIGHT AND ACT AS BEACONS ON THE LANDSCAPE

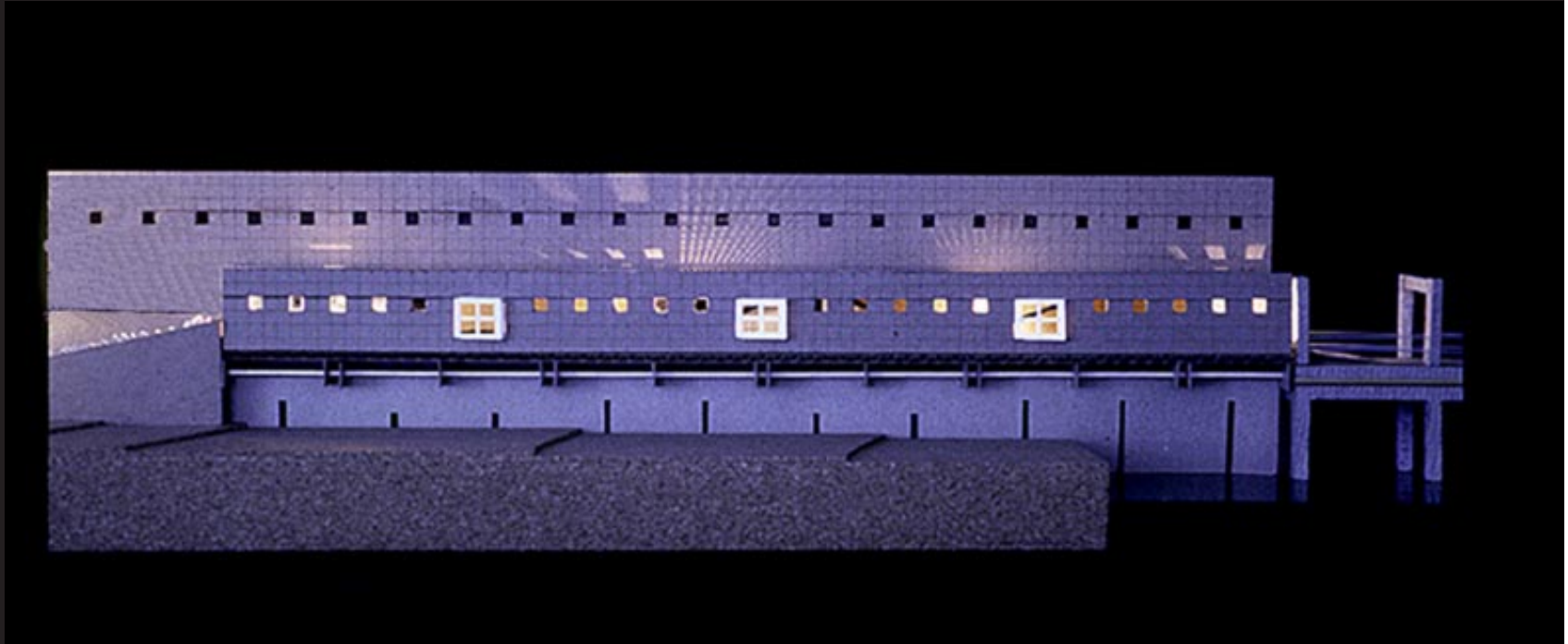
SCREENS ADMIT LIGHT AND AIR WHILE OFFERING PROTECTION FROM THE SUN

OPERABLE VENTS ALLOW WARM AIR TO ESCAPE

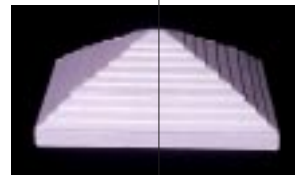


"... NOTHING CAN YIELD MORE UNFORESEEN RESULTS THAN A REPETITIVE MECHANISM."

Aldo Rossi

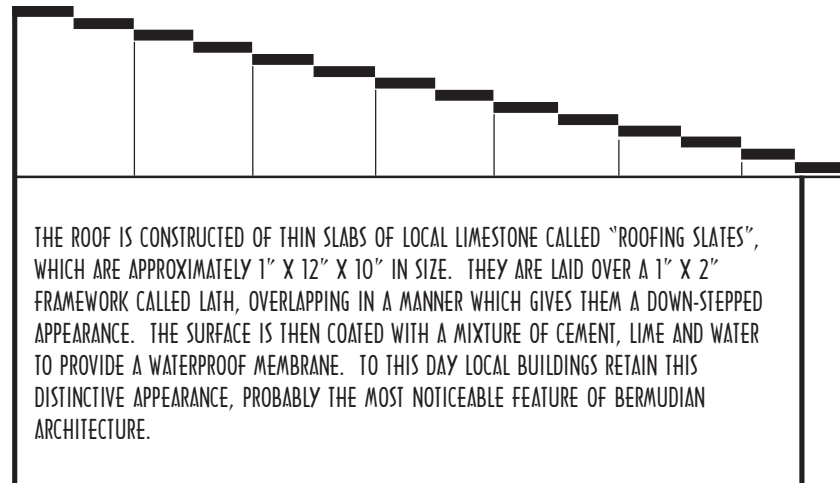


WATER:



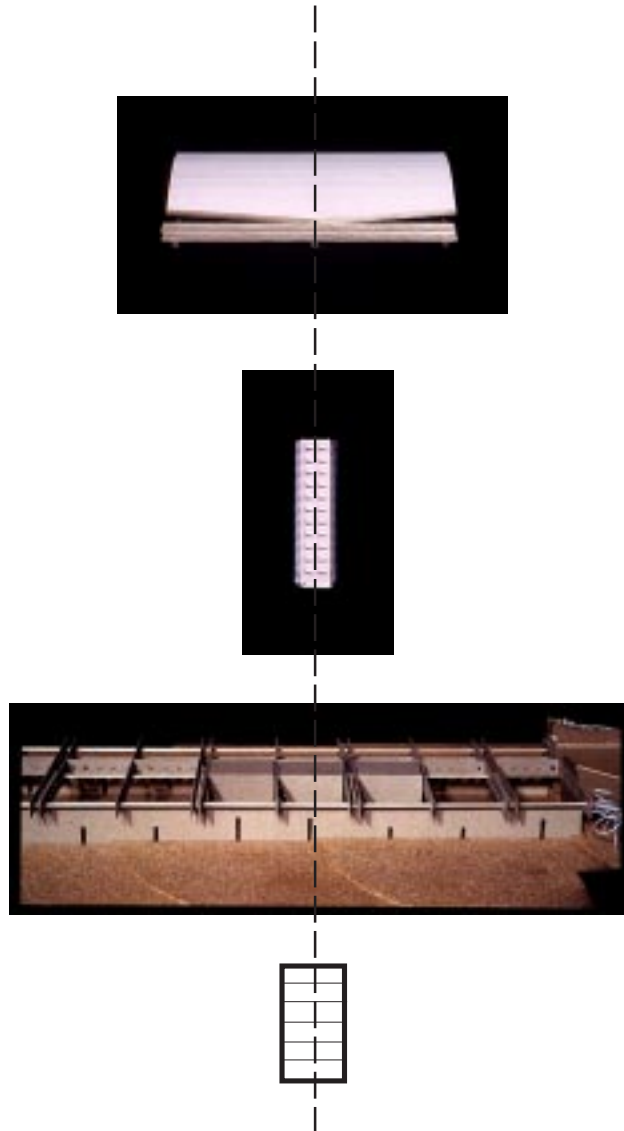
“ONE UNCHANGING ELEMENT OF ALL BUILDINGS IS THE ROOF - PROTECTIVE, EMPHATIC, AND ALL IMPORTANT - GOVERNING THE AESTHETIC WHATEVER THE PERIOD, WHEREVER THE PLACE. OFTEN A BUILDING IS ONLY A ROOF, COLUMNS AND FLOORS - THE ROOF DOMINANT, SHIELDING, GIVING THE CONTENTMENT OF SHELTER. UBIQUITOUS, Pervasively present, the scale or pattern shaped by the building beneath. THE ROOF, ITS SHAPE, TEXTURE AND PROPORTION IS THE STRONGEST VISUAL FACTOR.”

Geoffrey Bawa



THE ROOF IS CONSTRUCTED OF THIN SLABS OF LOCAL LIMESTONE CALLED "ROOFING SLATES", WHICH ARE APPROXIMATELY 1" X 12" X 10" IN SIZE. THEY ARE LAID OVER A 1" X 2" FRAMEWORK CALLED LATH, OVERLAPPING IN A MANNER WHICH GIVES THEM A DOWN-STEPPED APPEARANCE. THE SURFACE IS THEN COATED WITH A MIXTURE OF CEMENT, LIME AND WATER TO PROVIDE A WATERPROOF MEMBRANE. TO THIS DAY LOCAL BUILDINGS RETAIN THIS DISTINCTIVE APPEARANCE, PROBABLY THE MOST NOTICEABLE FEATURE OF BERMUDIAN ARCHITECTURE.

RAINWATER COLLECTION: ■ ■



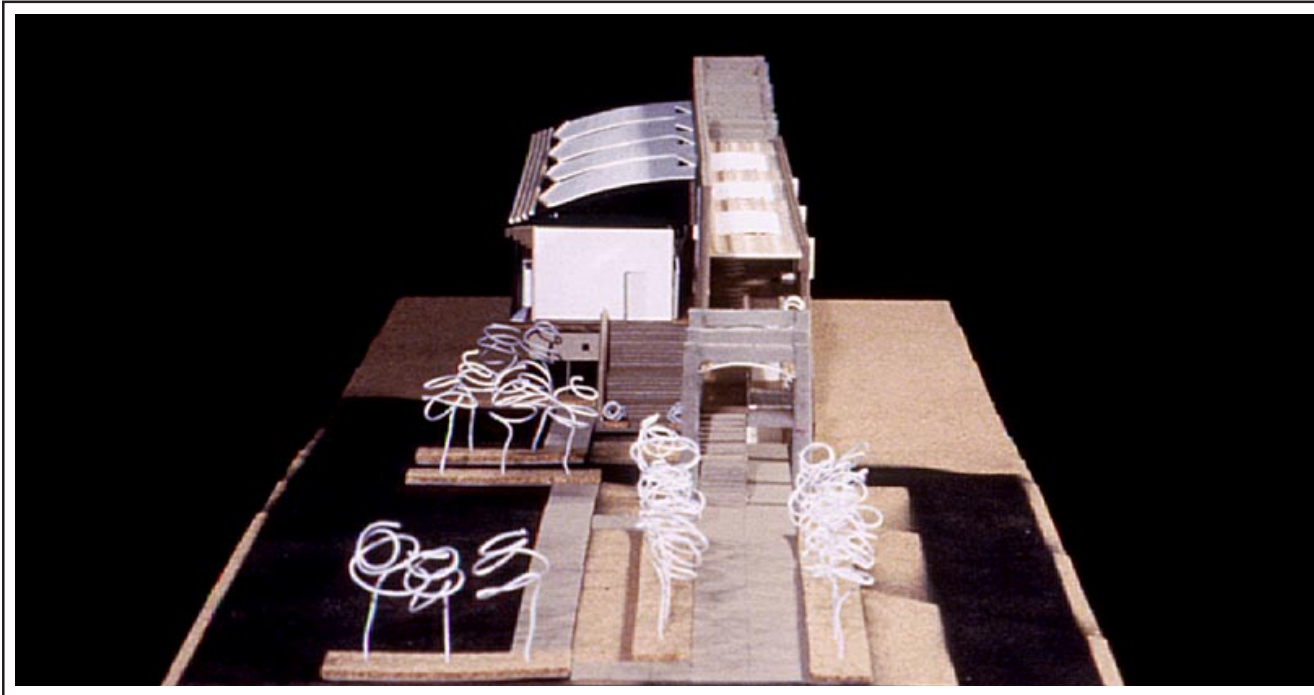
- ■ ROOF COLLECTS RAINWATER
- ■ LEADERS INSIDE GLASS BLOCK COLUMNS CARRY RAINWATER TO CISTERNS
- ■ CISTERNS STORE COLLECTED RAINWATER
- ■ RAINWATER IS TREATED BY REVERSE OSMOSIS
- ■ TREATED WATER ENTERS STATION

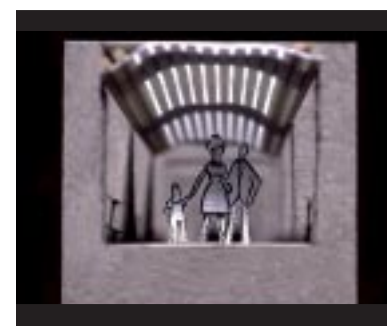
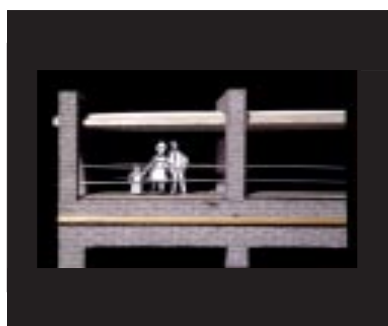
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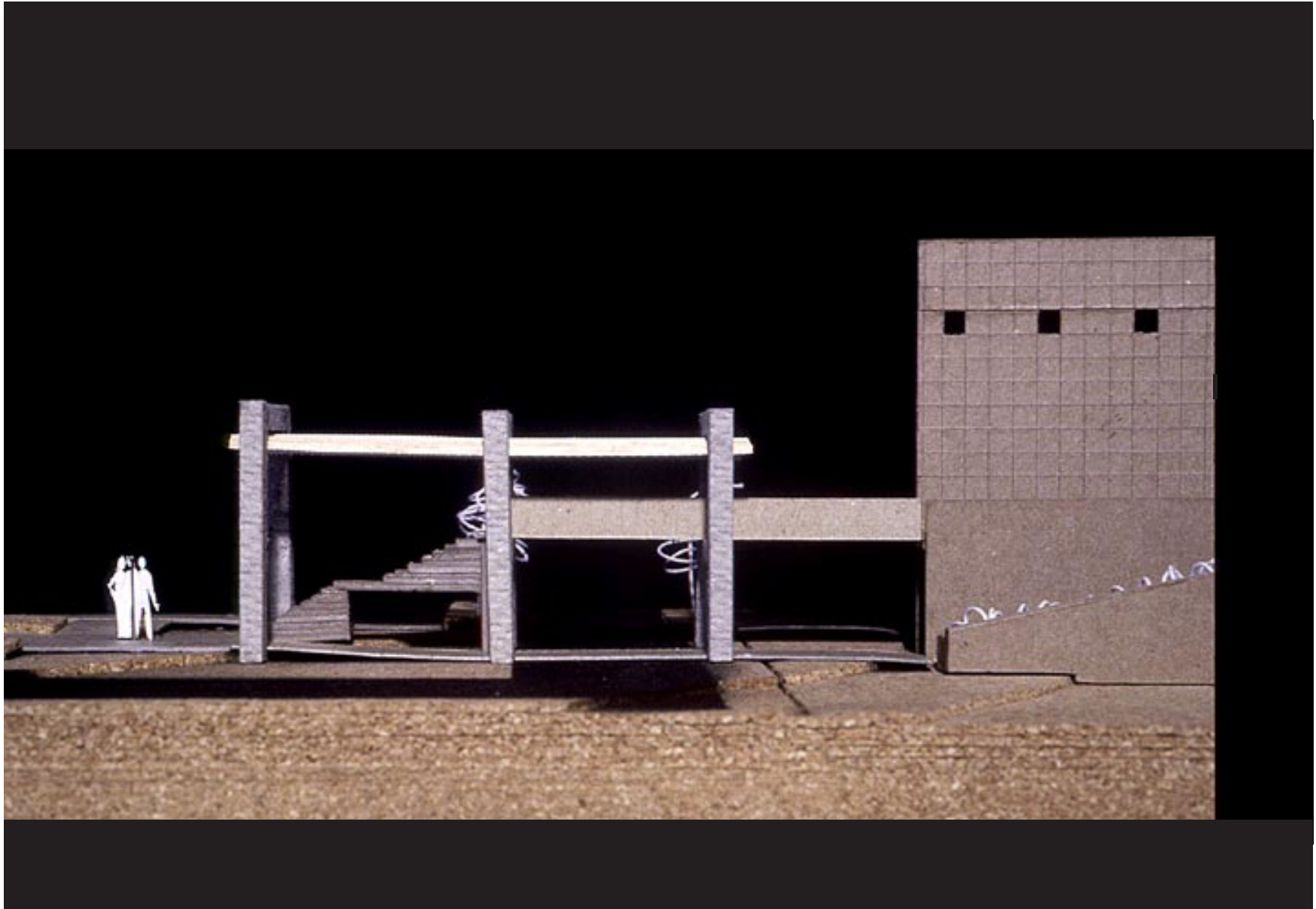


"I REMAIN FAITHFUL TO TRADITION, BUT NOT ITS SLAVE."
Charles F. A. Voysey

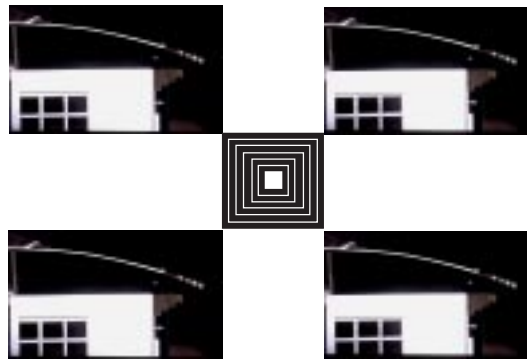
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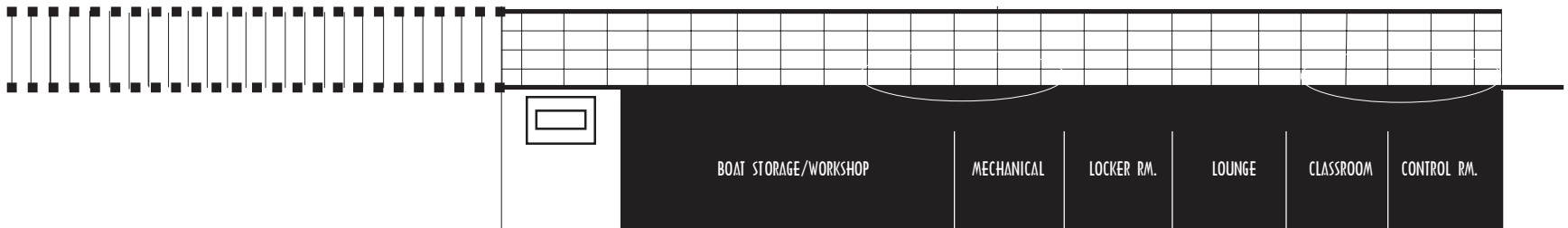
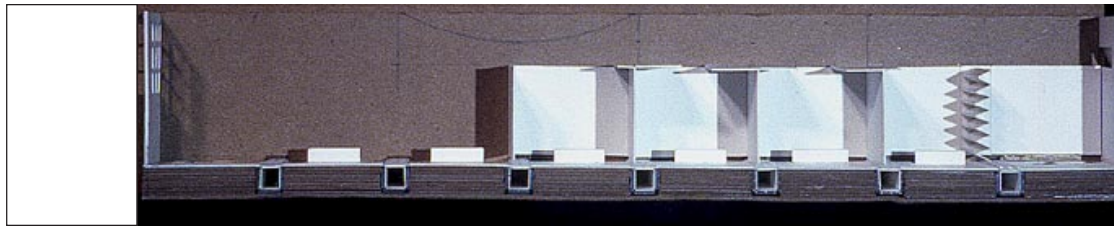
PROJECT:



"TO BE SIMPLE IS THE END, NOT THE BEGINNING OF DESIGN."

Charles F. A. Voysey

PLAN:

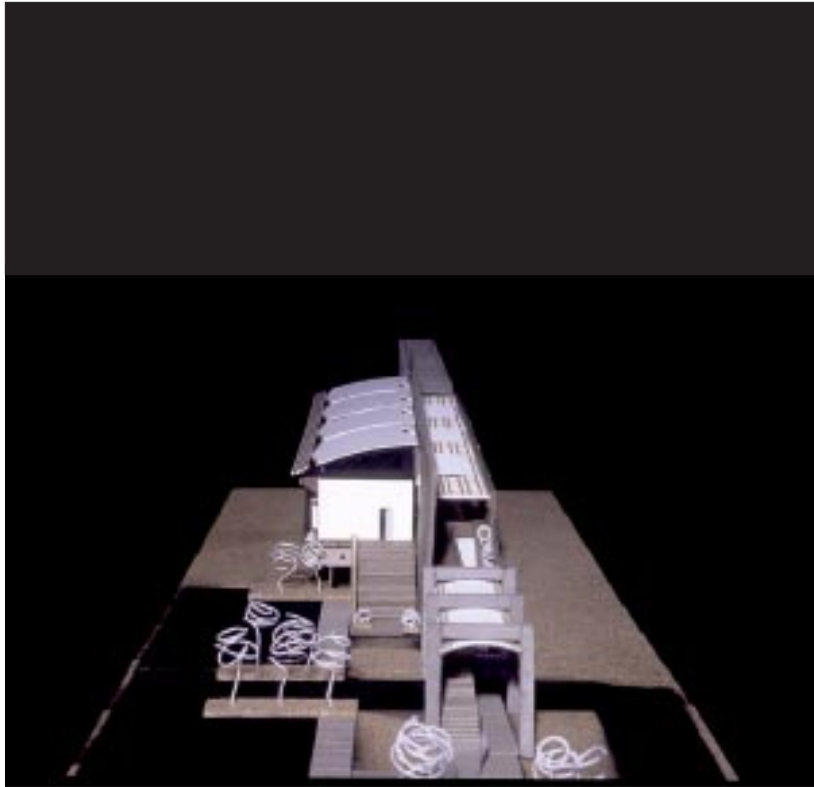




NORTH ELEVATION



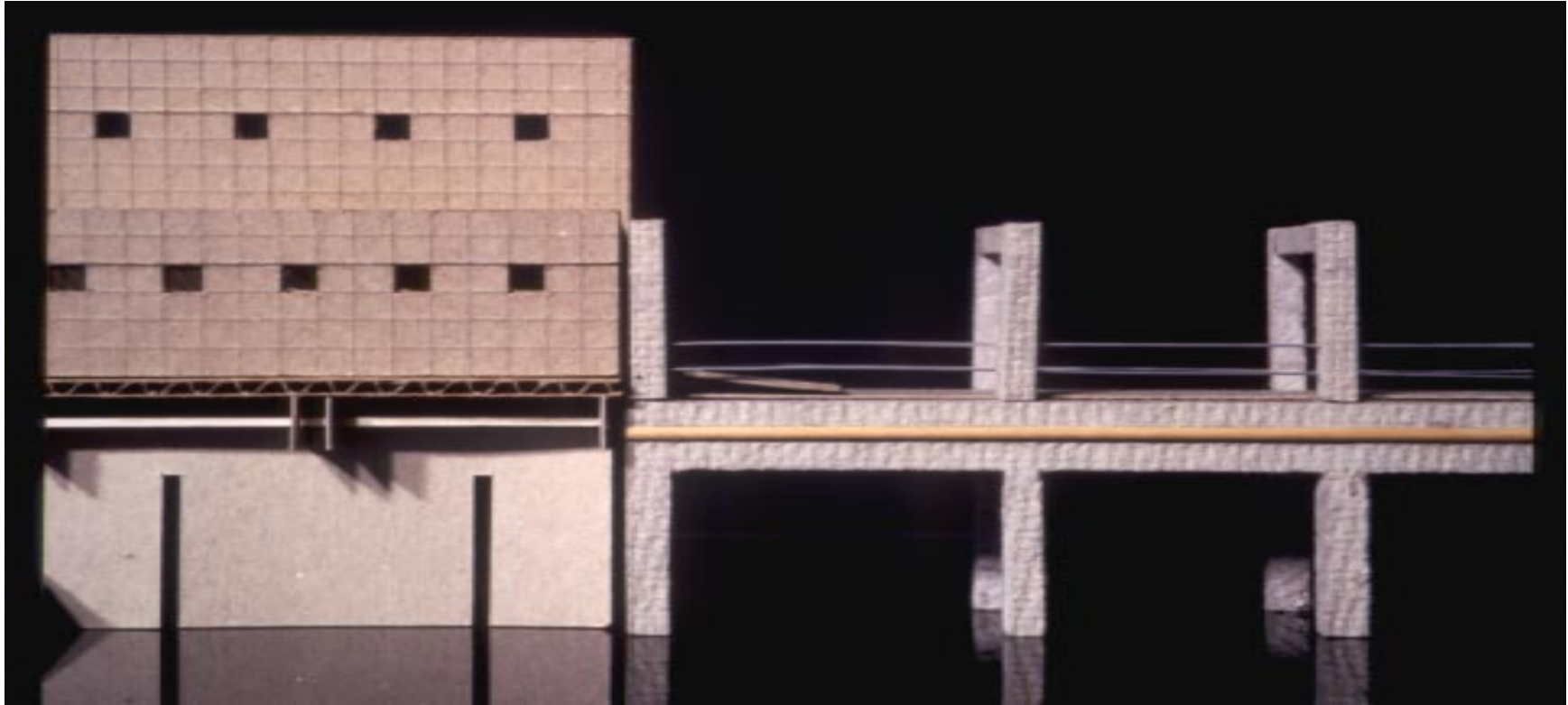
SOUTH ELEVATION



EAST ELEVATION

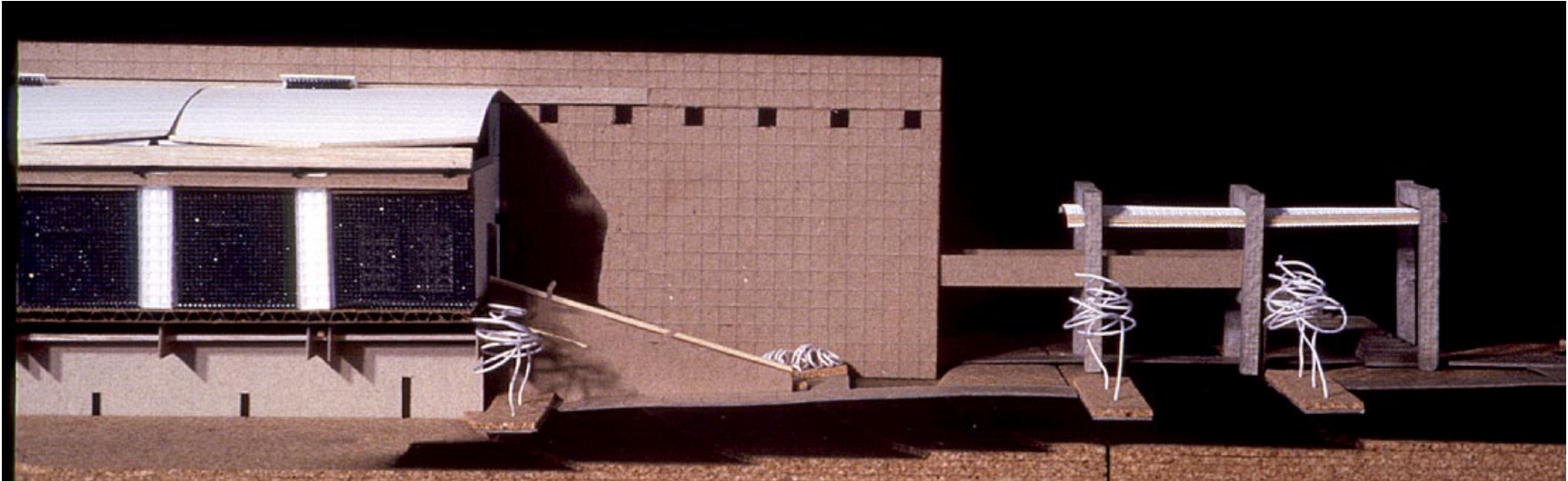


WEST ELEVATION



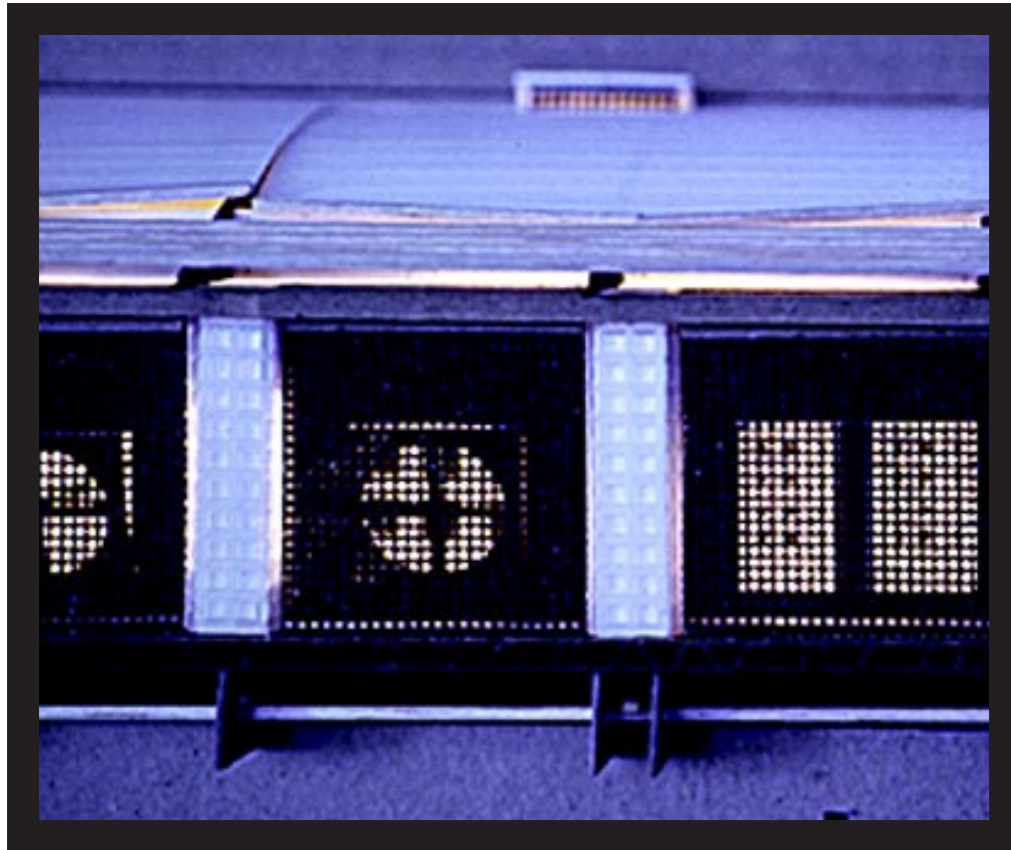
"SIMPLICITY, SINCERITY, REPOSE, DIRECTNESS AND FRANKNESS ARE MORAL QUALITIES AS ESSENTIAL TO GOOD ARCHITECTURE AS TO GOOD MEN."

Charles F. A. Voysey

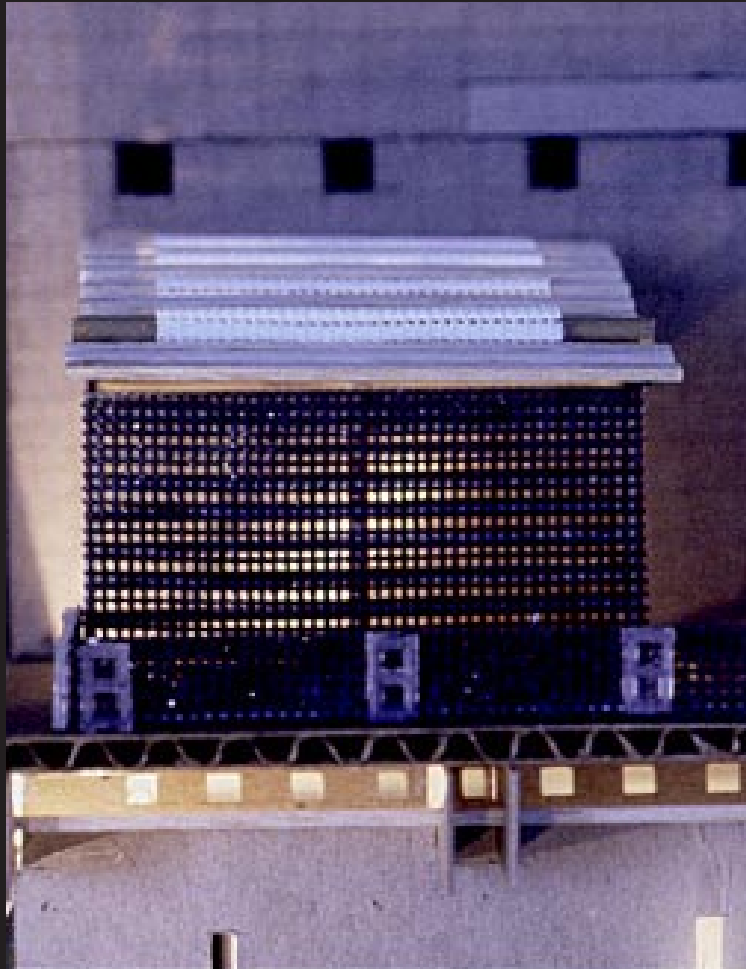


"ONE OF THE CHIEF REASONS WHY WE SHOULD EVOLVE OUR CREATIONS OUT OF A DUE CONSIDERATION OF CONDITIONS AND REQUIREMENTS, INSTEAD OF IMITATING TRADITION OR WELL-BELOVED EXAMPLES, IS THAT OUR CONDITIONS AND REQUIREMENTS ARE ALWAYS CHANGING; NEW METHODS AND NEW MATERIALS ARE CONSTANTLY BEING EVOLVED, AND MEN'S HABITS AND TASTES ARE FOR EVER DEVELOPING."

Charles F. A. Voysey

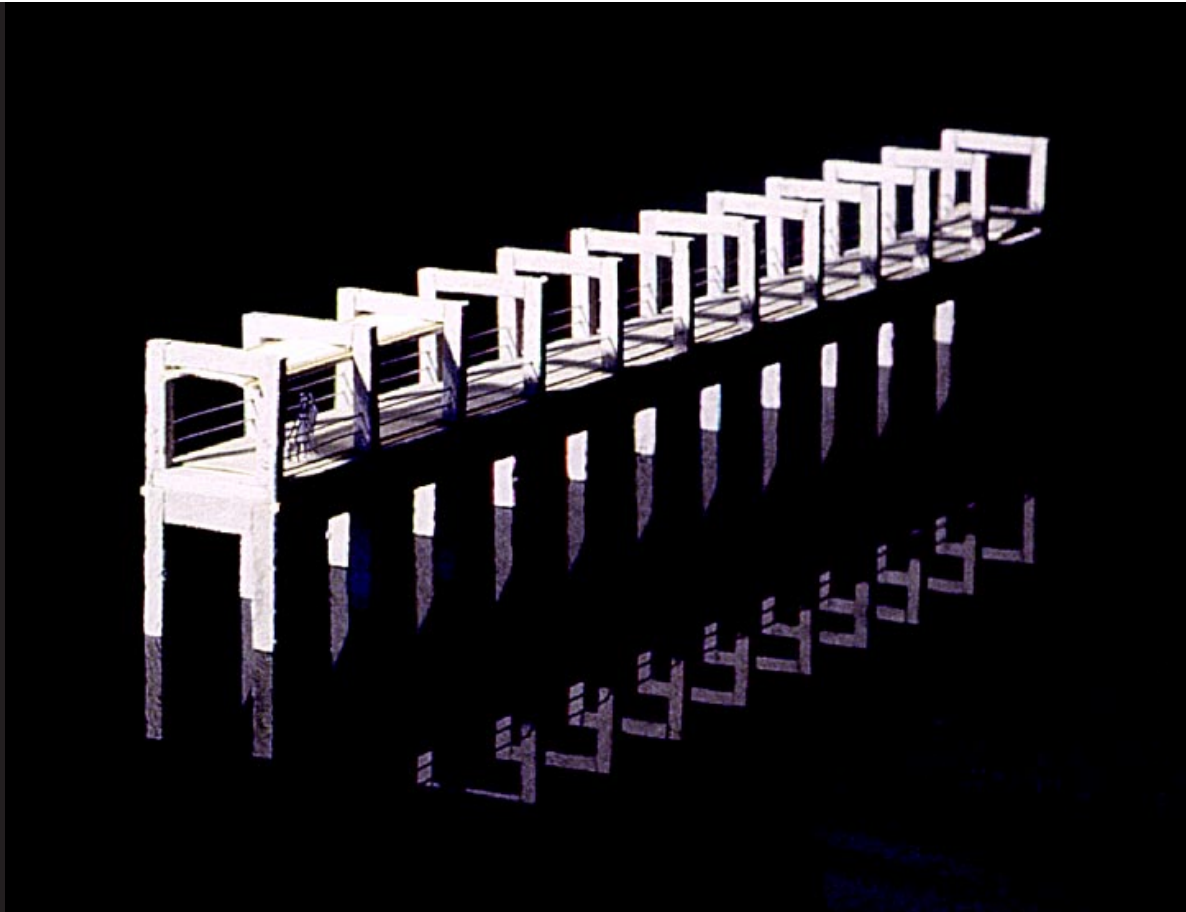






"ARCHITECTURE IS A THING OF ART, A PHENOMENON OF THE EMOTIONS, LYING OUTSIDE QUESTIONS OF CONSTRUCTION AND BEYOND THEM. THE PURPOSE OF CONSTRUCTION IS TO MAKE THINGS HOLD TOGETHER; OF ARCHITECTURE TO MOVE US."

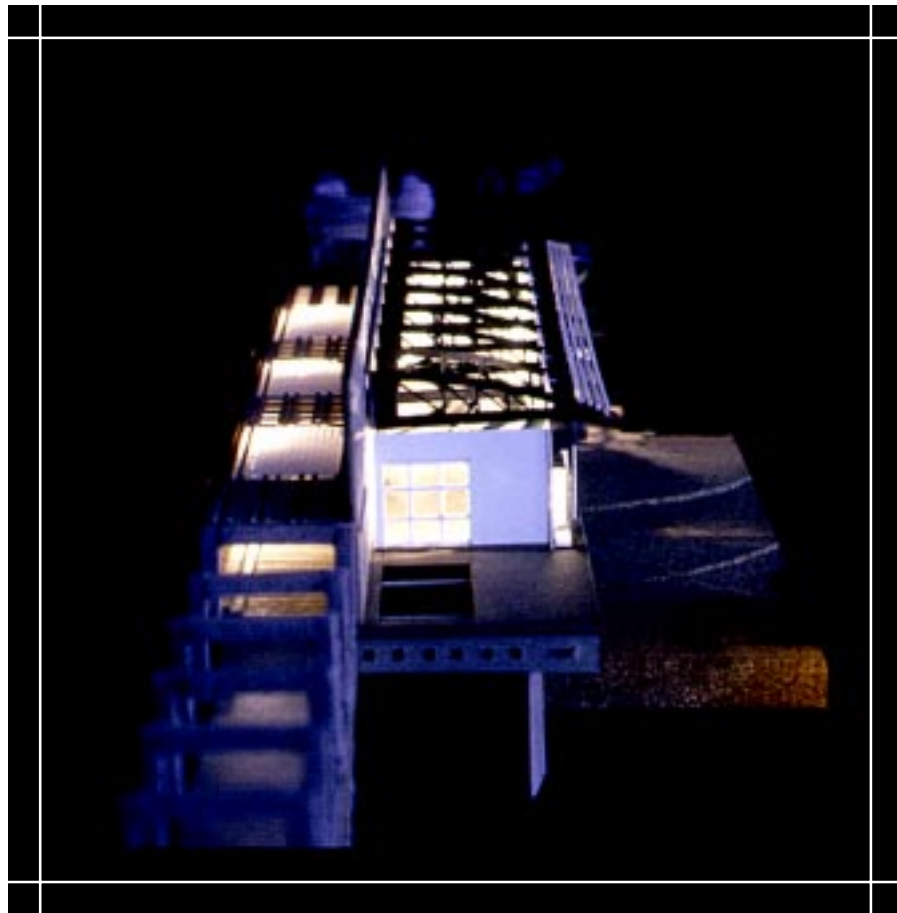
Le Corbusier

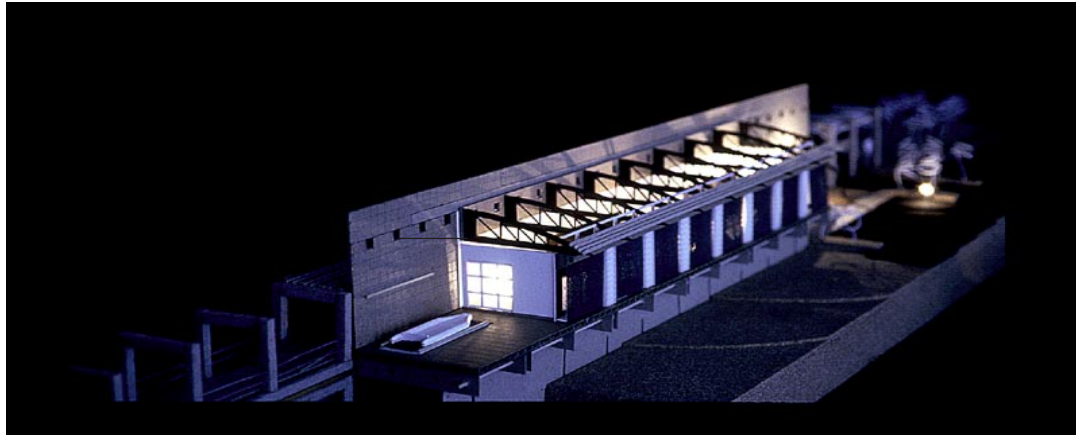


"WE MUST LEAVE THE DOOR PERPETUALLY OPEN FOR PROGRESS AND WELCOME ALL ATTEMPTS TO IMPROVE OUR TRADITIONAL MODES AND METHODS, WHATEVER THEY MAY BE. AS LONG AS FITNESS GOVERNS OUR REGARD FOR TRADITIONAL METHODS, TRADITION AS SUCH WILL DO NO HARM."

Charles F. A. Voysey



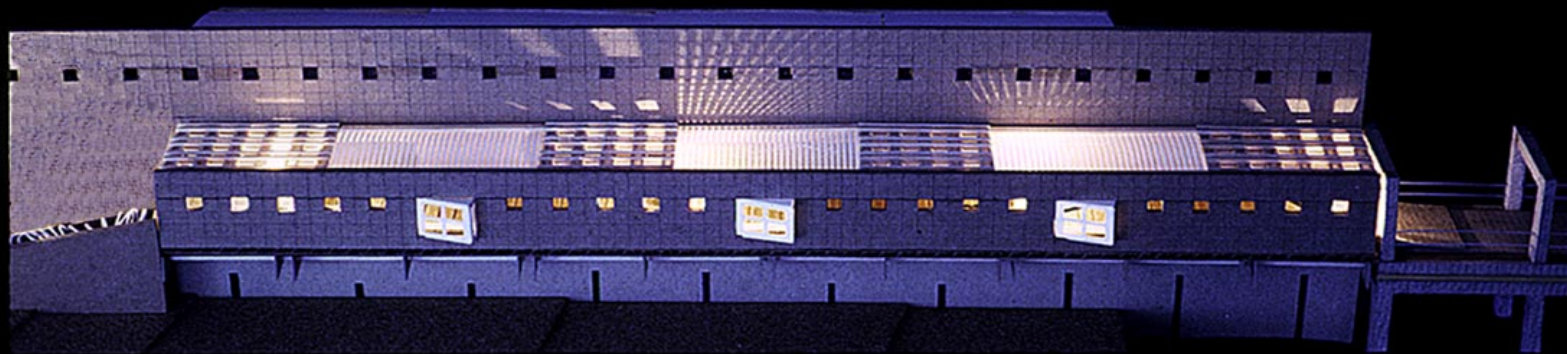




"MY REASONS FOR BUILDING REMAIN ESSENTIALLY THE SAME - THE SHEER PHYSICAL AND SPIRITUAL JOY OF IT, AND THE BELIEF THAT THE FUTURE OF CREATIVE WORK LIES IN THE HANDS OF THOSE WHO CAN CONSTRUCT THEIR OWN IDEAS."

Steve Badanes





"YOU EMPLOY STONE, WOOD AND CONCRETE, AND WITH THESE MATERIALS YOU BUILD HOUSES AND PALACES. THAT IS CONSTRUCTION. INGENUITY AT WORK. BUT SUDDENLY YOU TOUCH MY HEART, YOU DO ME GOOD, I AM HAPPY AND I SAY, THIS IS BEAUTIFUL. THAT IS ARCHITECTURE."

Le Corbusier



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TAYLOR, BRIAN, BRACE, *GEOFFREY BAWA*, NEW YORK: THAMES AND HUDSON, 1995.

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