

Precedence Research Presentation.

.group 5_ adrian larriva, miguel cruz, wendy quinonez, matt slingerland

National Assembly, Dhaka

Magma Arte and Congressos

background timeline.

.1901: Born in Osel, Estonia

.1905: Came to Philadelphia, USA

.1928: Studied classical architecture in Europe

.1937-1939: Participated in Public Housing Projects

.1947: Taught at Yale Univ.

.1955: Taught at Univ. of Pennsylvania

.1965: F.A.I.A. Medal of Honor Danish Architectural Association,

.1971: Gold Medal, A.I.A.,

.1972: Royal Gold Medal for Architecture, R.I.B.A.,

.1974: Passed away -When Louis Kahn's corpse was found by the NYPD on the evening of 17 March 1974 in the public lavatory at Penn Station in New York, it took several days for the police to identify him as one of the world's most admired architects. Kahn had died swiftly of a heart attack and the only form of identification among his possessions was his passport in which he had crossed out his address.



Louis Kahn

other works.

.Yale Univ.Art Gallery

1951-53

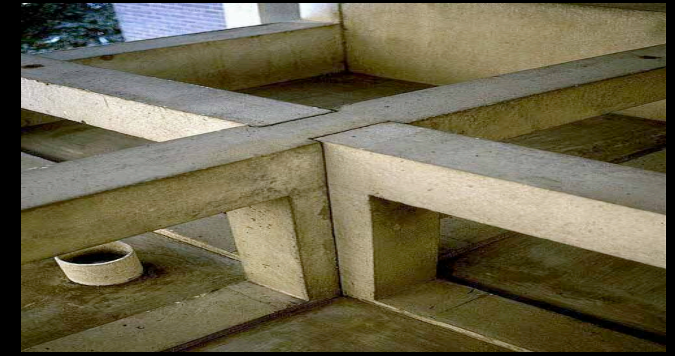
New Haven, Connecticut



. Newton Richards Medical Research Building

1957-65

Philadelphia, Pennsylvania



. Salk Institute for Biological Studies

1959-65

La Jolla, California



. Kimbell Art Museum

1966-72

Fort Worth, Texas



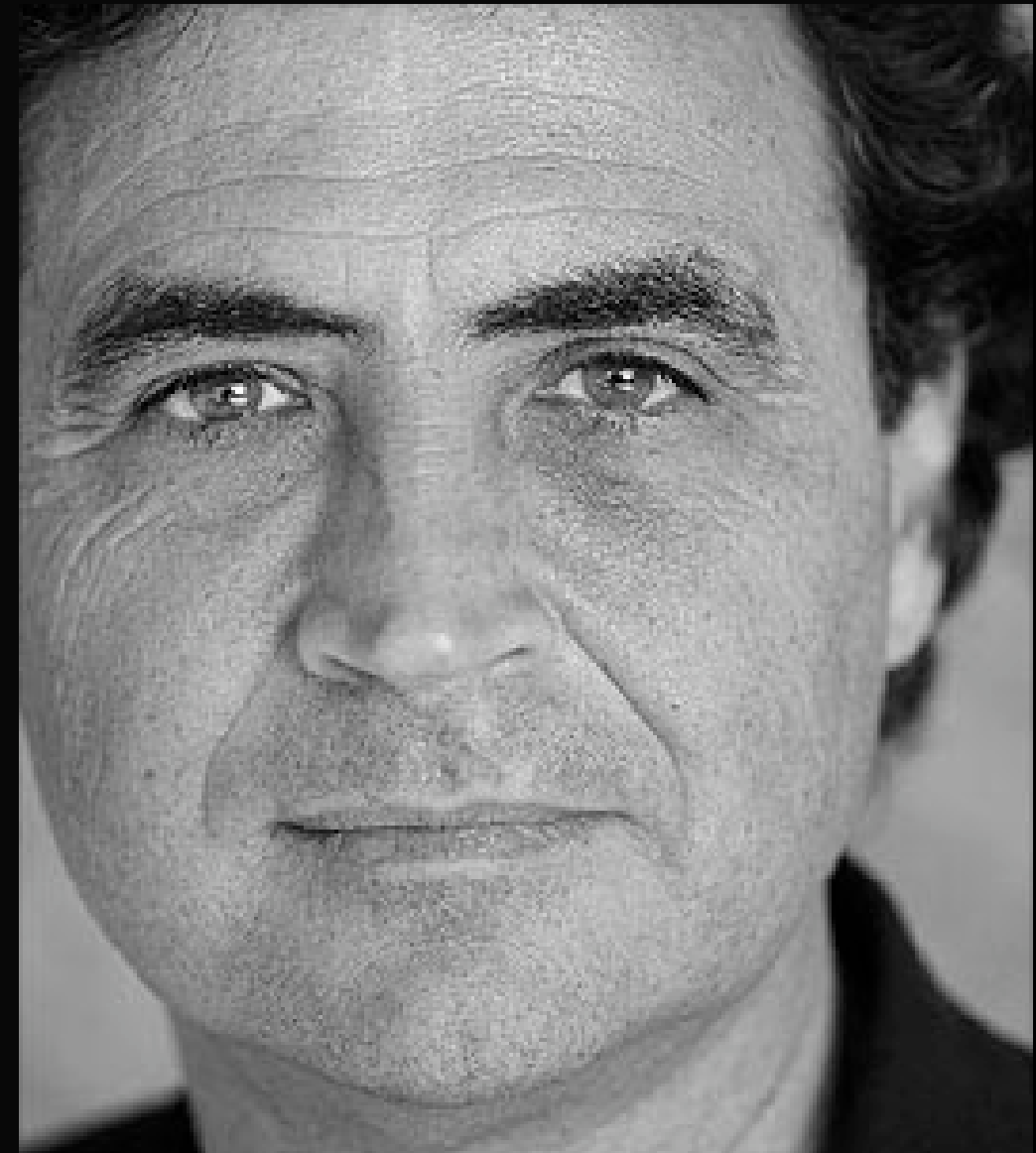
background timeline.

. **Felipe Artengo Rufino** was born in Santa Cruz de Tenerife, Spain in **1954**. Studied at the University of Barcelona, specialized in urban planning, **1971–1978**. Worked in several studios of architecture, **1979–1980**.

. **Fernando Martin Menis** was born in Santa Cruz de Tenerife, Spain in **1951**. Studied at the University of Barcelona, specialized in urban planning, **1970–1978**. Worked in Ricardo Bofill's studio in project Marne la Vallée, Paris, **1979–1980**.

. **José María Rodríguez-Pastrana Malagón** was born in Santa Cruz de Tenerife, Spain in **1952**. Studied at the University of Barcelona, specialized in urban planning, **1970–1977**. XI Course of higher studies in Higher Institute of Urban Planning I.E.A.L. Madrid in **1980**.

. Partnership with Fernando Martin Menis and José María Rodríguez-Pastrana Malagón since **1981**.



Artengo-Menis-Pastrana

other works.

. San Agustin High school's Residence

La Laguna, Tenerife

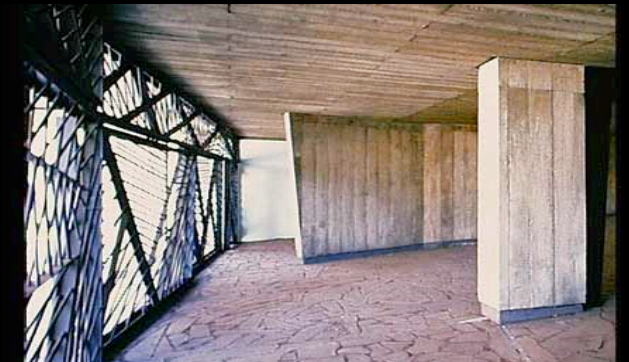
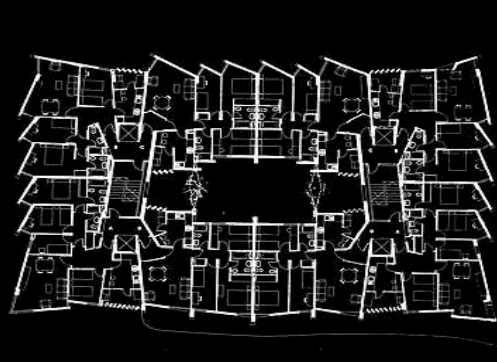
1988



. 60 Social Housing Visocan

La Laguna, Tenerife

1998



. Canarian Islands Government Presidency's Headquarters

Santa Cruz de Tenerife

1999



. MAGMA ART and CONGRESS

Adeje Tenerife

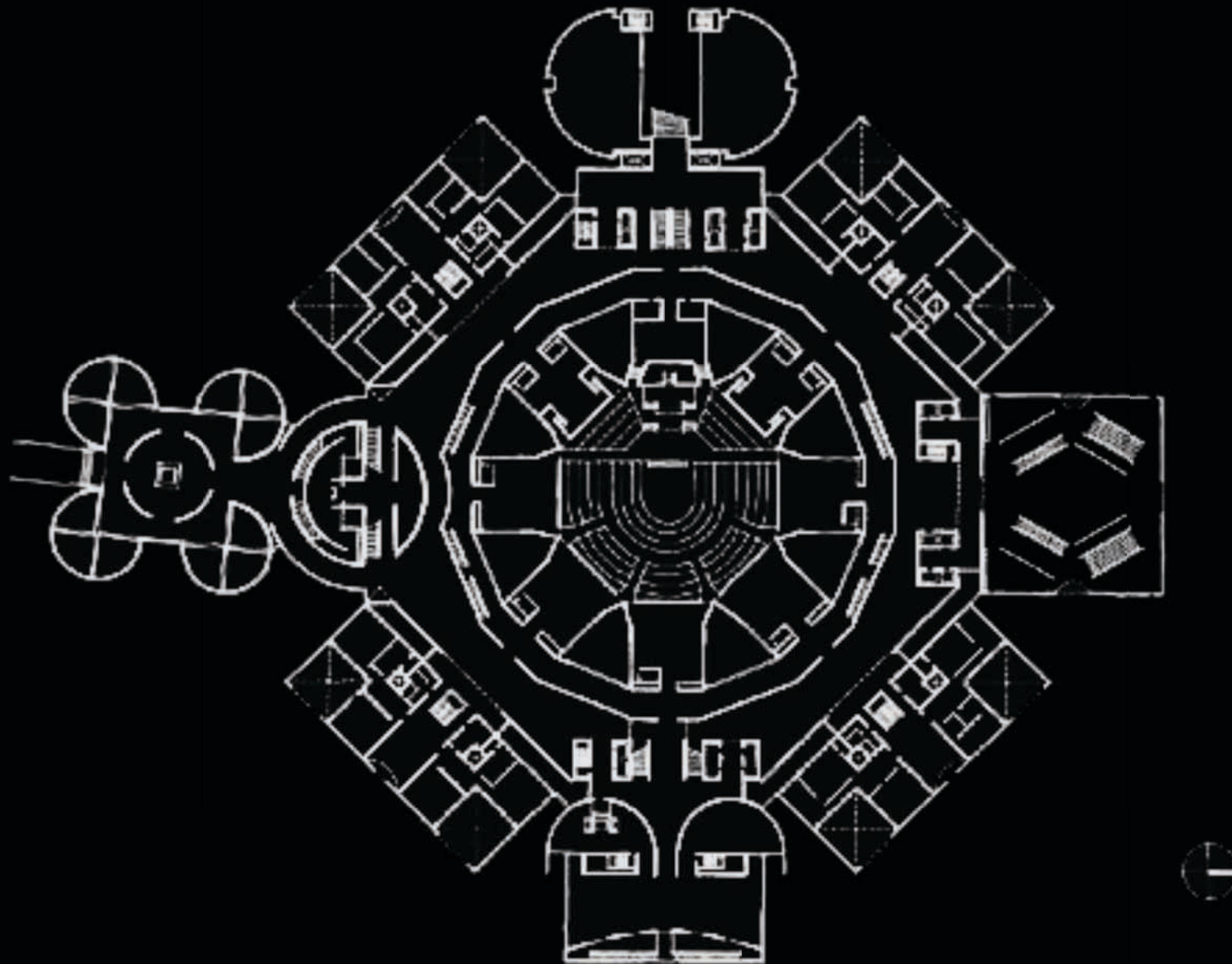
2005



National Assembly, Dhaka.

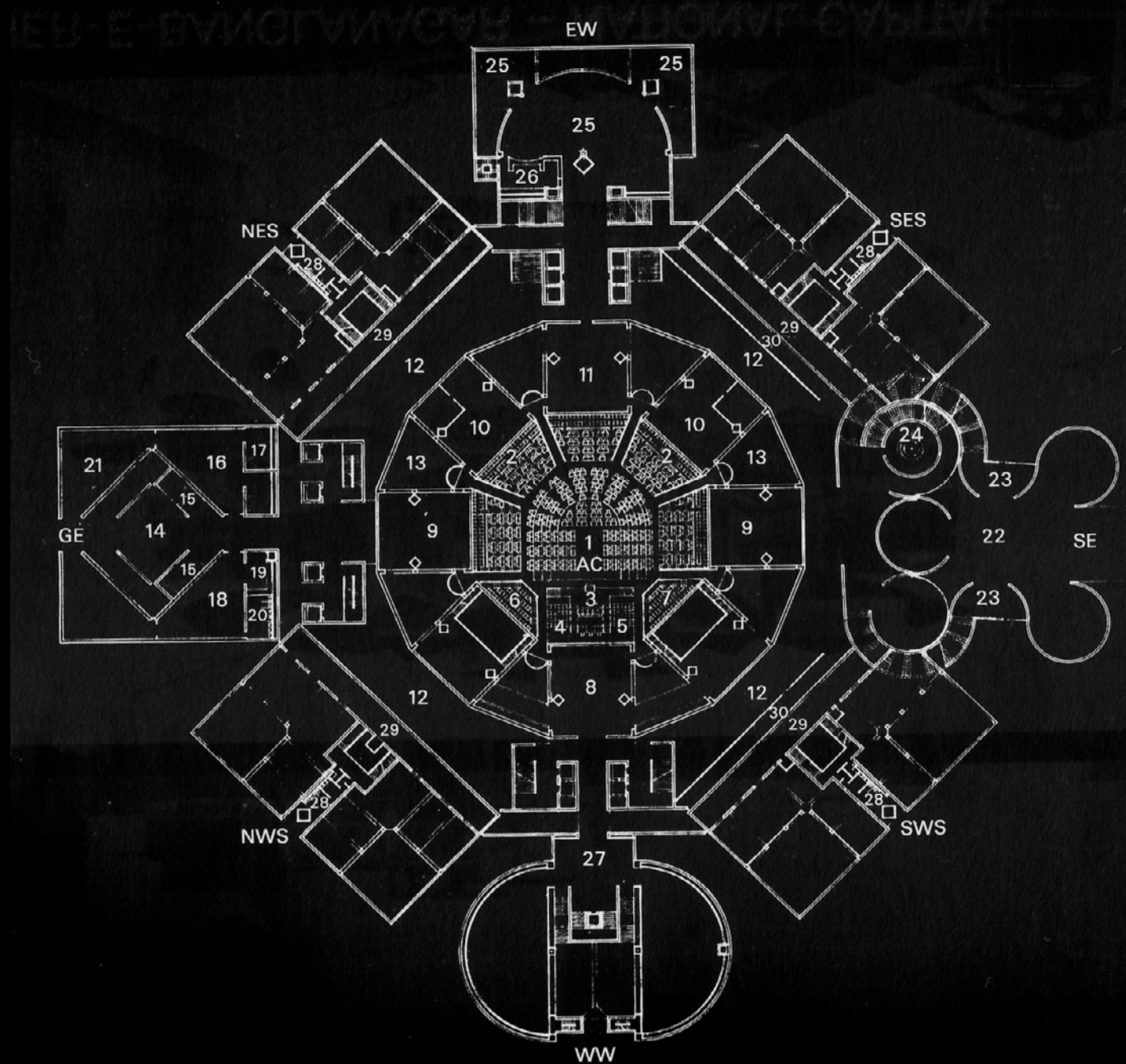
program.

- . the central area of the building is the assembly hall.
- . the plan clearly shows the forms of the buildings that surround the assembly hall.
- . the presidential entrance, with the diagonally arranged flights of stairs, is in the north corner.
- . prestigious rooms for government ministries face the west.
- . the prayer hall is oriented toward the south...oriented toward mecca
- . a ring-shaped ambulatory, extending from the ground to the ceiling, circles the centrally symmetric assembly room.



program cont'd.

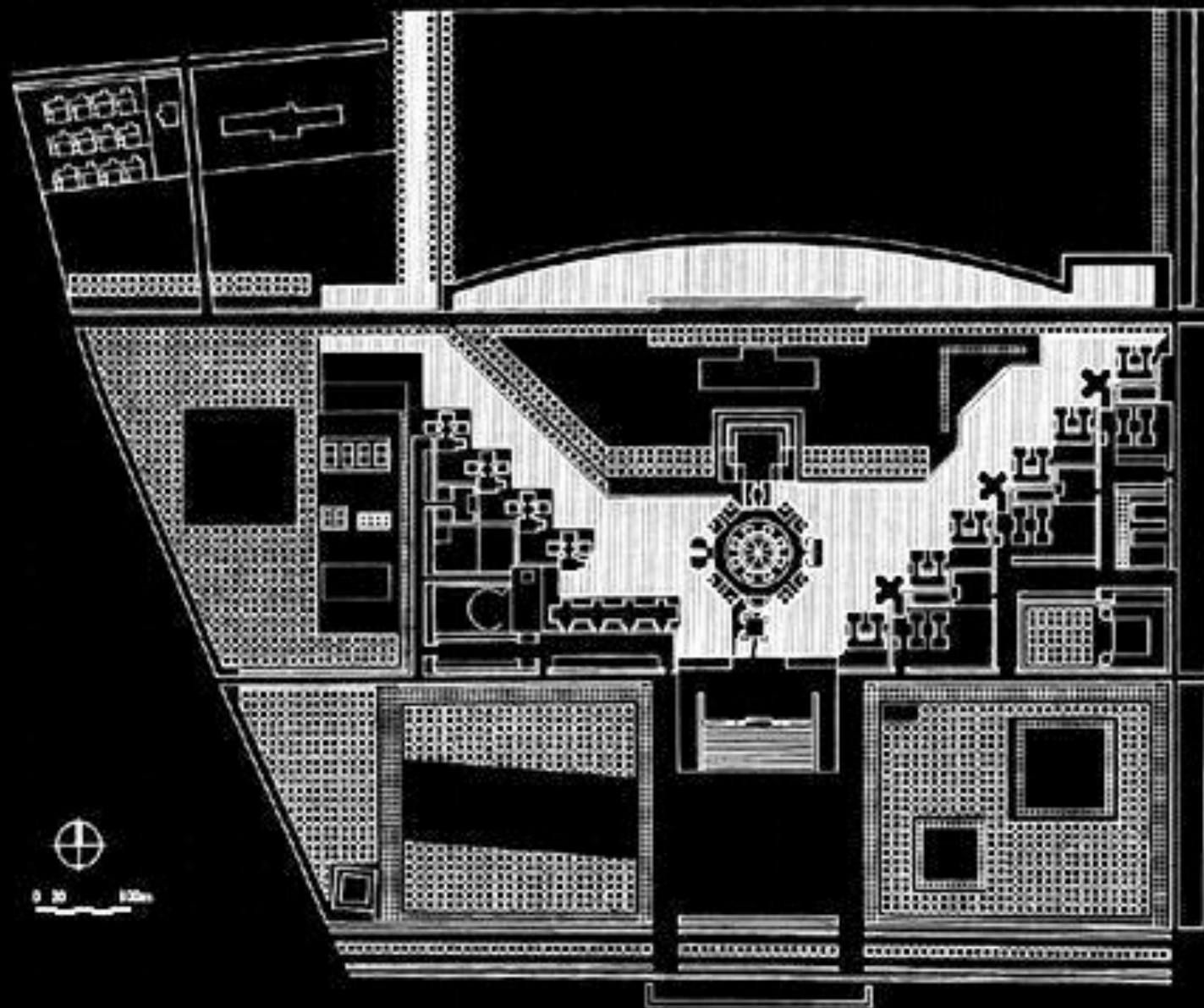
1. assembly chamber for 300 members of the National Assembly
2. 200 additional seats for joint sessions
3. speakers dias
4. speakers box
5. presidents box
6. official gallery
7. distinguished visitors gallery
8. distinguished visitors and official gallery lobby
9. division lobbies
10. ante chambers, cloak room, and toilets for the MNA
11. MNA's entrance lounge
12. ambulatory
13. light and ventilation courts
14. garden entrance
15. stairs to public galleries
16. post office and bank
17. chamber to post office and bank
18. ward, ward officer and staff
19. pantry
20. toilets
21. porch
22. main entrance
23. entrance and stairs to public galleries
24. stair to prayer hall
25. lounge for MNA's
26. pantry
27. distinguished visitors and official gallery entrance lobby to assembly chamber
28. toilets
29. air plenum
30. ramp to 58' level



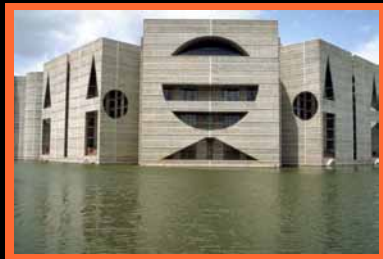
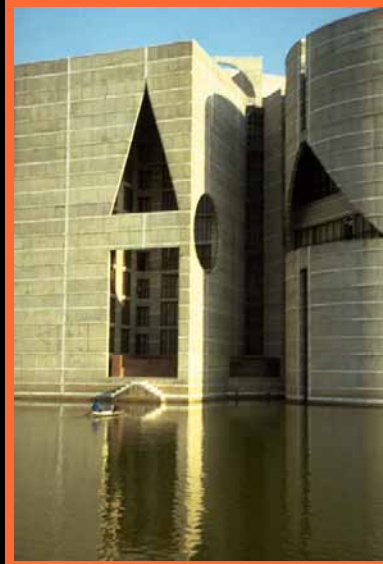
site context consideration.

“I was given an extensive program of buildings: the assembly, the supreme court, hostels, schools, a stadium, the diplomatic enclave, the living sector, market, all to be placed on a thousand acres of flat land subject to flood...i kept thinking of how these buildings may be grouped and what would cause them to take their places on the land. On the night of the third day, i fell out of bed with a thought which is still the prevailing idea of the plan. I made my first sketch on paper, of the assembly with a mosque and the lake. I added the hostels framing this lake. This came simply from the realization that “assembly” is of transcendent nature. Men come to assembly to touch the spirit of community, and i felt that this must be expressible. Observing the way of religion in Pakistani, i thought that a mosque woven into the space fabric of the assembly would reflect this feeling. It was presumptuous to assume this right. But this assumption took possession as an anchor.”

-Louis Kahn



aesthetic.



The national assembly building resembles a huge fortress. the fact that the building is surrounded by water and connected only by ramps and bridges to the mainland reinforces the impression of a fortification.

aesthetic cont'd.

“Kahn brought his aesthetic of authenticity to a climax in the National Assembly building: by dint of its blunt, individuated presence, the building forces the viewer to reflect on the nature of the institution she faces, and on her role and place within it. An octagonal building of simple geometries and repeating forms, the national assembly building is unlike other civic monuments: it is some giant child's set of building blocks, uniquely composed. massive walls of striated concrete are punctured by monumental, multistoried, non-glazed openings. the emptiness of these apertures exaggerates the heaviness of the facades, making the national assembly building seem a hollow, vacant building ready to be appropriated by anyone who approaches it. both because of its physical size and because of the facade's elementary composition, the national assembly building seems to have always occupied this site, primordial and permanent, like the pyramids at Giza or the Pantheon in Rome.”



aesthetic cont'd.

the honesty in which he approached the composition is also expressed in the way he handled the materials. On the inside and outside of the building, Kahn was careful to leave traces of how and with what the national assembly building was made.

“ settling on poured, reinforced concrete early in the design, he calculated that construction workers- usually women carrying baskets of wet concrete on their heads- could pour no more than five feet a day. the joint separating one day's pour from the next is recessed, then faced with an inlaid white marble band. the resulting striations are the trace marks of the process by which people constructed this enormous building.”

touch is a primitive sense and kahn took care to appeal the sensation of the hand in his treatment of texture in the national assembly building. Kahn leads you to not only think about what the surfaces look like, but also to think about how the surfaces feel. the marble banding, which marks the human scale and the process in which the building was made, also gives a sense of the weight of his heavy materials.

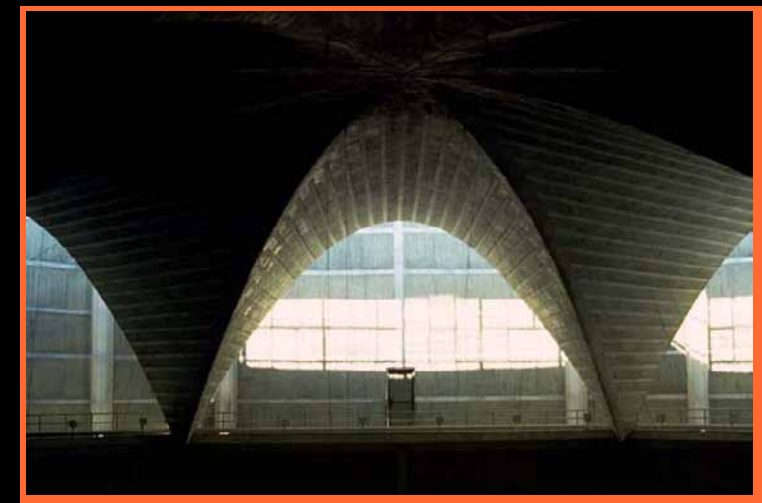
construction.



Louis Kahn's Capital Complex in Dhaka is an inspiring statement of extraordinary clarity and beauty. The originality, power, and aura of the complex are unparalleled in modern architecture. That a unique design of such magnitude was realized in Bangladesh solely with local materials, skill and technology, is in itself no mean achievement.

The construction of the Capital Complex was both an opportunity and a challenge. It was an opportunity to enhance and test local competence and a challenge because of its scale and innovative requirements. Kahn's Complex may be accredited with more than one innovation – the scale of the building, the use of as-cast concrete and exposed brick masonry.

Kahn was profoundly philosophical in temperament and his concern with local traditions of construction bordered on the obsessive. He wanted the concrete surface to bear the imprint of local skill and technology. No smear of paint or plaster was to adulterate the purity of the surface. Kahn preferred the matte surface wrought by timber to the gloss left by steel. To Kahn, building in the local tradition was the only way. Quality attainable through the best use of local materials and techniques was his ideal. Kahn was meticulous and left nothing to chance. Fred Langford, a competent engineer, well-versed in the art and technique of construction, was sent to Dhaka well before construction of the superstructure was scheduled. Langford undertook an extensive situation analysis of the local tradition of construction. He understood well the limitations and potentials of local construction system. Through trial and error, Langford worked out the exact mix of concrete, the right timber, its required moisture content, type of form oil, and method of casting concrete.



Throughout the construction, it was local materials all the way. Even the crowning parabolic roof of the Assembly Chamber 117 feet above the floor, was cast by the traditional system. The shuttering and scaffolding for the roof were locally fabricated from steel sections available at a PWD store. Traditional scaffolding materials were used for all other purposes. Local bamboos tied together in grids with coconut husk ropes were the basis of all scaffolding. Bamboo ramps were constructed to manually hoist building materials. Even the formwork for the arches was in wood and bamboo. The only equipment imported was machinery for the wood workshop and four tower cranes to hoist materials. It was the first time that such expensive cranes had been employed in Bangladesh. Their use, even after 20 years, is still extremely limited.

Kahn's buildings express and respond to the materials and means they are built with. The system of construction is very clear in his building. Kahn's Capital proves beyond doubt that great works of architecture can be built by very simple means.

economic.

.The national assembly was built to house parliamentary meetings twice a year.

.The project was funded by the government...Ayub Khan.

“Louis Kahn had a most unusual commission. His client cared little about the design and character of what he was buying. Kahn had access to a virtually unlimited flow of funding and worked with intermediaries whose respect for him was near total. Such a constellation of circumstances allowed him the creative and economic freedom to design a complex equal to his ambition.”

the project cost of the national assembly complex (200 acres):

1332.38 million Taka = about 53 million USD (on completion in 1983; stated by public work department of Bangladesh)

historic.

Pakistan, a muslim country, was created in 1947 by the partition of india. Its two sections, east and west, were divided by more than one thousand miles of India, and ethnic, social, and economic differences abounded between them. West Pakistanis spoke Urdu and were light-skinned, more westernized, better educated, and richer. East pakistanis spoke Bengali, were dark-skinned, and suffered from an unending round of natural catastrophes and from economic impoverishment. The seat of government was located in Islamabad, which is in west pakistan. the multiple advantages of the western portion of the country combined with its geographic separation from the east meant that, politically, the less-privileged east pakistanis were dramatically underrepresented, and there interests and needs were often ignored. For these reasons, pakistan suffered a series of upheavals and in 1958, the commander in chief of the army, Ayub Khan, took the reins of government, imposed martial law, and declared himself supreme commander. Ayub pronounced himself committed to a political system that joined democracy with the muslim faith. He established a 150-member National Assembly and a presidential term of five years. in 1960, Ayub Khan was elected for the 5 year term. The first democratic election was scheduled for 1965. Khan knew that to get reelected he would have to win the support of east pakistan. because of this, he declared that the national assembly would meet not in islamabad, but in the former capital of east bengal, dhaka. This became the site of louis Kahn's national assembly complex.

social impact:

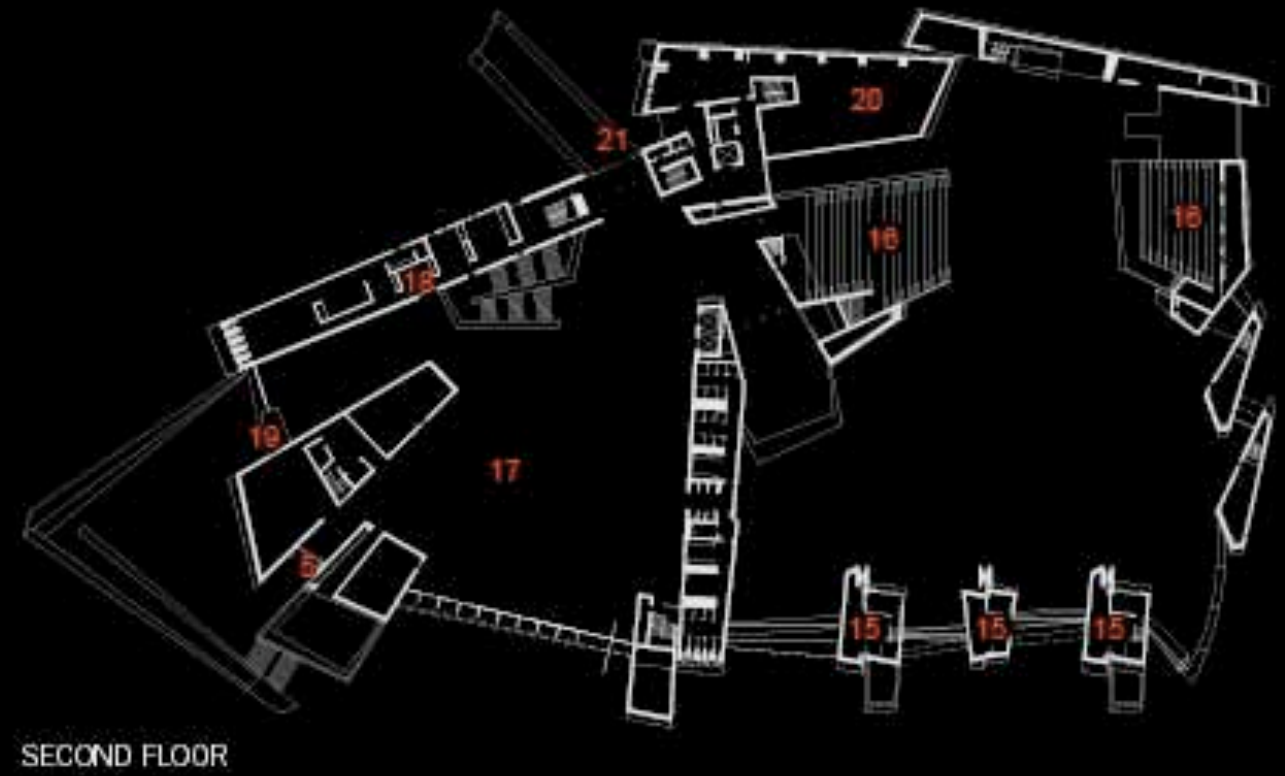
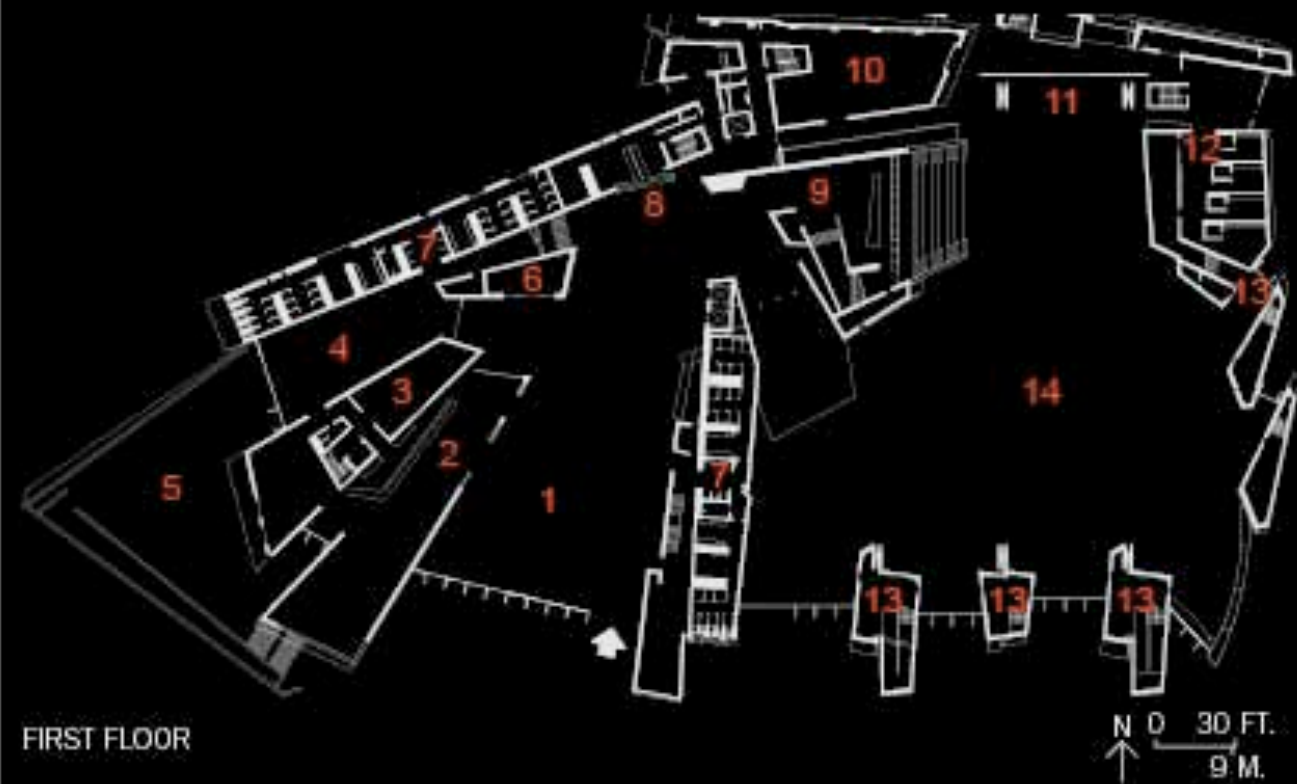
The assembly complex building has become the symbol of Bangladesh. It represents all the notions of order and social justice of a people living in need and poverty. Arising from the desire of establishing government power it has become the image of the ideals of development and democratization. Its stature, its quality, and its space dominate a generally mediocre environment.

Magma Arte and Congresos.

program.

The center was designed to provide a complex for community, business, governmental and arts events in the southern area. It was originally planned as a convention centre, but this publicly financed facility evolved during the design process to include theatre and concert halls, and a fully equipped fly tower. The exterior of the complex is a striking architectural form encompassing 22,296 square-meters and occupying a seven acre site. The 2,787 square-meter main hall is column-free and can be divided into nine separate rooms of various sizes with movable platforms for seating and staging areas, while the upper floor can accommodate up to 26 smaller meeting rooms. This style of design differs from most other convention centers in Spain, where fixed seating and separate auditoriums are the norm.

program cont'd.



- | | | |
|---------------|-------------------|------------------------|
| 1. Lobby | 8. Reception | 15. Light control |
| 2. Café | 9. Coatroom | 16. Grandstand seating |
| 3. Kitchen | 10. Storage | 17. Top hall |
| 4. Restaurant | 11. Stage | 18. Offices |
| 5. Terraces | 12. Dressing room | 19. Press office |
| 6. Shop | 13. Wardrobe | 20. Technical |
| 7. Bathrooms | 14. Main hall | 21. Secondary entrance |

site context consideration.

It is located **70** kilometers from Santa Cruz, in a recently developed tourist area on **Tenerife**, one of Spain's Canary Islands. The island environment presented many challenges for the construction and design team, including limited access to imported technologies for construction and a very tight budget. The construction of the **Magma Arts and Congress Centre** in an area of limited access to resources and technology, and its position in a **volcanic environment**, highlighted the versatility, durability and suitability of concrete.



historical.

As the region's **first** major public building, the innovative and striking complex is not only historically, but also architecturally significant. It stands apart from similar **Spanish** and **European** designs, and accurately reflects and incorporates the surrounding environment.

aesthetic.

Concrete was used as the fundamental material in the construction of the Centre because of its versatility and attractiveness. The **concrete** used for the outer structure was **mixed on-site** using an aggregate of **chasnera**, a sandy-colored volcanic ash that when exposed creates a rough textured surface, aimed specifically to match the Center's environmental surroundings. The roof contrasts with the rough exterior walls as a smooth and flowing fiber-cement material that provides the “**molten lava over volcanic mountain**” effect.

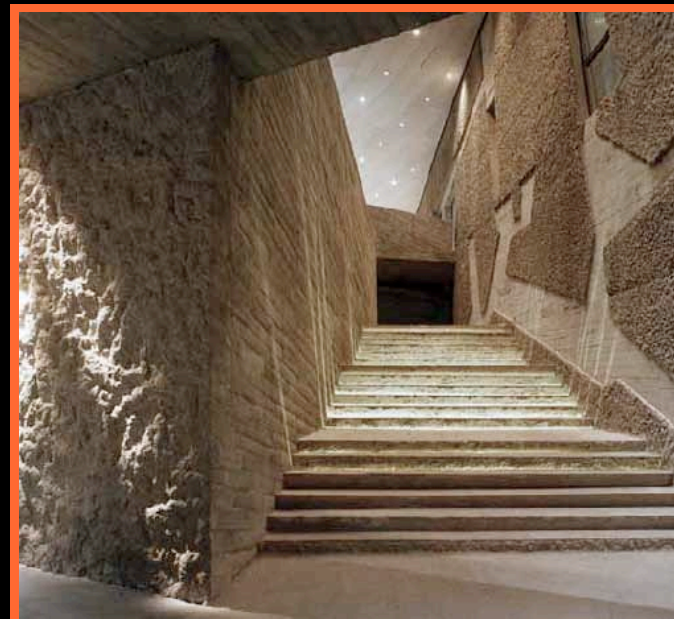


The design impetus was to reflect the essence of the environment, using materials that would meet the requirements of an architecturally unique and structurally demanding project. The **volcanic** environment of the island influenced the **visual theme**, with the exterior resembling the conversion of molten lava into stone that characterizes the surrounding landscape.

structural.

The **principal** structure of the complex incorporates **twelve concrete piers** arranged around the interior, with alternating sections of glass or **fibre-cement-panel infill** – which result in the angled planes throwing light into vivid patterns inside.

The ceiling is created from **fibre-cement** panels mounted on **steel trusses, beams and framing**. The complexities of the curved ceiling requiring intricate calculations were solved using ingenuity and resourcefulness – **fibre-cement** panels were employed that had never been used before in curvature. The new roofing material meant special sealants were needed for the **75,000** screw holes, and custom fasteners were required for the movable interior divisions.



Magma's **column-free, 30,000** square-foot main lobby is wide, deep and dark, and opens to the expansive main hall where the high, **fibre-cement** ceilings part to allow natural light. Retaining walls surround the complex and guide visitors to the forecourt of the building. A concrete bridge extends from the upper level as a secondary entrance on the sloping site.

ecenomical.

.the final cost of the project was 36 million dollars for a 240,000 square-foot facility

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