

*Galcom*

FOLDER = 1

Offered  
at the feet of the Mother and Sri Aurobindo

A salute to  
Jyotindra, Chandulal, Pavitra, Udar, Khirode, Mrityunjay  
all Mother's Engineers



"The realisation of Golconde was not merely the constructing of a beautiful modern house in reinforced concrete for sadhaks, but a vehicle for the spiritual awakening and development of innumerable people who otherwise might not have been touched by the Light for a long time to come. It was the first practical means of contact and communication of any important size between East & West, that the Ashram had... In its way, it too is a temple, joining men & women of all the world irrevocably to the Divine, like a jewel from the original mine that gave it its name."

Agni (Agnes) Sammers  
Wife & collaborator of  
Frank Sammers,  
one of the architects of Golconde

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*DR. C.L. GUPTA, Pondicherry*  
*April 2003*

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SAARIC Monograph 01  
Sri Aurobindo Ashram, Pondicherry 605 002  
Typeset by Kolam Information Services, Pondicherry  
Printed & bound by All India Press, Pondicherry  
August 2002





"In the physical, the Divine manifests as Beauty."  
The Mother

*Golconda*

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(A dormitory for disciples  
of Sri Aurobindo)  
(1936-48)  
Architects : Antonin Raymond, Frank  
Sammars, George Nakashima

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"A visual poem in space where severity  
has melted into dream delicacy."

Robi Ganguli (Photographer)



Interior view

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## History

It all started crystallising in 1935, when Antonin Raymond practising in Japan (who had come to Tokyo in 1923, after the great earthquake, to assist Frank Lloyd Wright in the design of many buildings for reconstruction of the city) replied to his friend Phillipe St.Hilaire (Pavitra), an engineer disciple of Sri Aurobindo and the Mother that he would be happy to do some work for the Mother, as suggested by Pavitra. The Mother had got a piece of land (80 m x 30 m) and wanted to build a dormitory to house the disciples in a beautiful building. Rs 100,000 were provided by Sir Akbar Hyadari, the then Dewan of State of Hyderabad. The building was christened Golconde after the famous Golconda Fort of Hyderabad and a mine of jewels.

Cover page : Northern facade  
Overleaf : A sketch by George (1997)  
Facing page : Another view



In the words of the architect, "no time, no money were stipulated in the contract. There was no contract – everything was done to free the architect completely so that he might give himself entirely to his art and science. And yet simultaneously, on the job, perfect order was maintained and every nail counted."

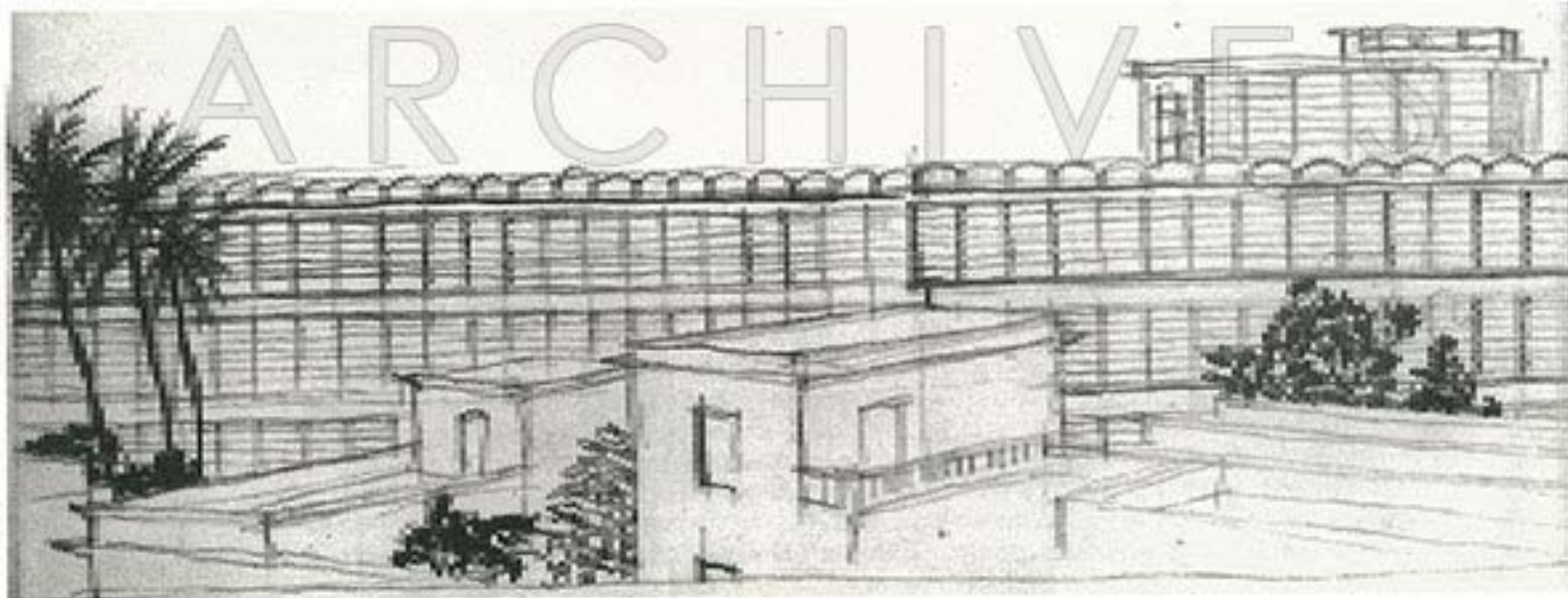
## Design

Prior to designing, Antonin Raymond was sent many photographs of the town and site and he came up with a strikingly simple solution. In his letter of October 1935, he, in fact, expressed the wish, "I would not like you to be shocked by the appearances – we are laying the foundation of a new kind of architecture." The building is reported to have started on October 10, 1937 and was almost finished by 1948.



Plan showing the location of Golconde

A sketch by George Nakashima, the site architect





The workshop

### Construction and Materials

Apart from an architectural model, a full scale prototype room was made before starting the actual construction. The execution of the building left nothing to chance. A laboratory was set up for testing cement, aggregates, sand grading and test blocks of concrete etc., (In pre-standardisation days). A workshop was set up to custom build all fittings required in copper, bronze and brass. A machine was designed to cut large size *cuddapah* stone tiles for the floor.

All wood work was in Burma teak except for insides of cupboard drawers being in red cedar (as things kept for long on teak wood left stains). Bricks were of size 210 mm x 100 mm x 55 mm as the brick manufacturer rejected the architect's suggestion of 70 mm thickness for they could not be dried in the green stage because of humidity in Pondicherry. At that time, it was cheaper and easier to import steel rods (with test certificate) from France and cement from Japan.



Special moulds were made to cast curved roof tiles of 5 x 3.5 feet and 1 inch thick so that reinforcement does not get corroded because of insufficient cover. Asbestos louvres were custom built by Everest Company. Spare pieces of most of the items were kept but have not been needed as there have been practically no breakages for half a century. It shows the quality of manufacturing and maintenance.

## Architectural Features

"Pondicherry is an old 18th century town one hundred miles south of Madras on the Indian Ocean, and the seat of Sri Aurobindo Ghose, one of India's foremost spiritual teachers. Salt winds blow from the sea, there are typhoons and periods of rainy weather, but mostly there is a blazing sun and the climate is hot and damp. The problem before the Architect, Antonin Raymond, was to design a Guest House for the disciples of the Ashram which would include living and sleeping accommodation, workrooms, and utility rooms, (dining facilities are provided elsewhere) and design it in a way to keep the inside as cool as possible, without mechanical aid. Raymond has solved the problem by covering the entire wall surface with operable, horizontal louvres which afford protection against the sun and wind, but allow through ventilation. The body of the building is of reinforced concrete, left natural except for white plaster on the end blank walls. The building achieves architectural distinction by thorough integration of plan, structure, and final design. The fundamental principles of architecture – simplicity, economy, directness, and closeness to nature – were consciously and consistently observed."

## What architects say

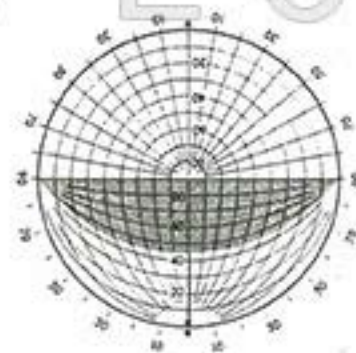
### Jeffrey Cook :

"In one of the most remote parts of India, one of the most advanced buildings in the world was constructed under the most demanding of circumstances concerning material and craftsmen. This reinforced concrete structure was completed primarily by unskilled volunteers with the most uncertain of supplies, and with virtually every fitting custom fabricated. Yet this handsome building has a world stature, both architecturally and in its bioclimatic response to a tropical climate of 13°N of the equator. It has the reputation of being the most comfortable building in Pondicherry, but it has no mechanical system.

Golconde is essentially a passively cooled design, that is, continuously open to natural convection. Only one room wide, it has a single loaded corridor. All masonry surfaces are plastered with white lime. There is no glass in the continuous windows, only movable custom fabricated cement-asbestos louvres that are hand operated. The sliding teak doors also are ventilated by their

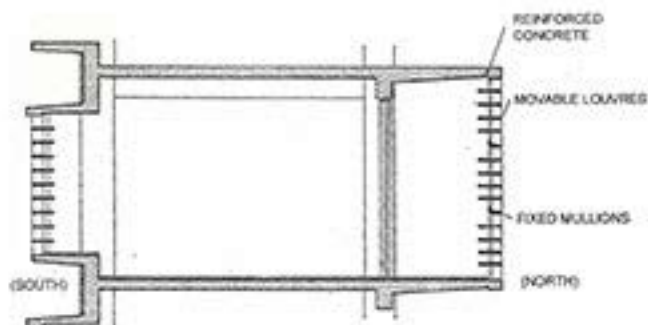


The hand operated asbestos-cement louvres



Sun path diagram and shading mask  
(Ogry & Ogry)





Part section showing the different treatment of the north and south facades



A typical room in Golconde

construction of alternating slats. Even the furniture is custom designed by the architect for the climate. The beds have light teak frames that will hold mosquito nets. Cane bottoms for chairs and beds allow maximum ventilation. A ventilated roof construction, a green garden with pools and fountains, and a high solid wall to retain the pool of cool air around the garden are other aspects of the design which is located only four blocks from the Indian Ocean."

#### Aladar Olgyay & Victor Olgyay :

"This dormitory in India is not a building in the ordinary sense, it was designed to provide a space, which is roofed, shaded and ventilated. The elevations therefore consist of a giant Persian blind, which is clearly and sincerely expressed. Here, really the shading device is the architecture.

The two elevations have the same basic principle, but are treated differently; the recessed strip gives a contrasting horizontal character, and on the inside provides a sitting alcove.

On both the north and south facades, the entire building surface is equipped with operating horizontal louvers to afford protection from the sun, and from violent wind and rain, while allowing for ventilation. The only glazing is the ventilators above the doors. High ceilings throughout ensure maximum air circulation. Walls of pierced precast slabs shield the interior from sun. Galleries serve the double function of acting as corridors and creating a deep insulative area in front of the sleeping area."

#### Charles Correa & Ashish Ganju :

"Golconde is the finest example of modern functional architecture built in India in the pre-independence period."

## Specifications

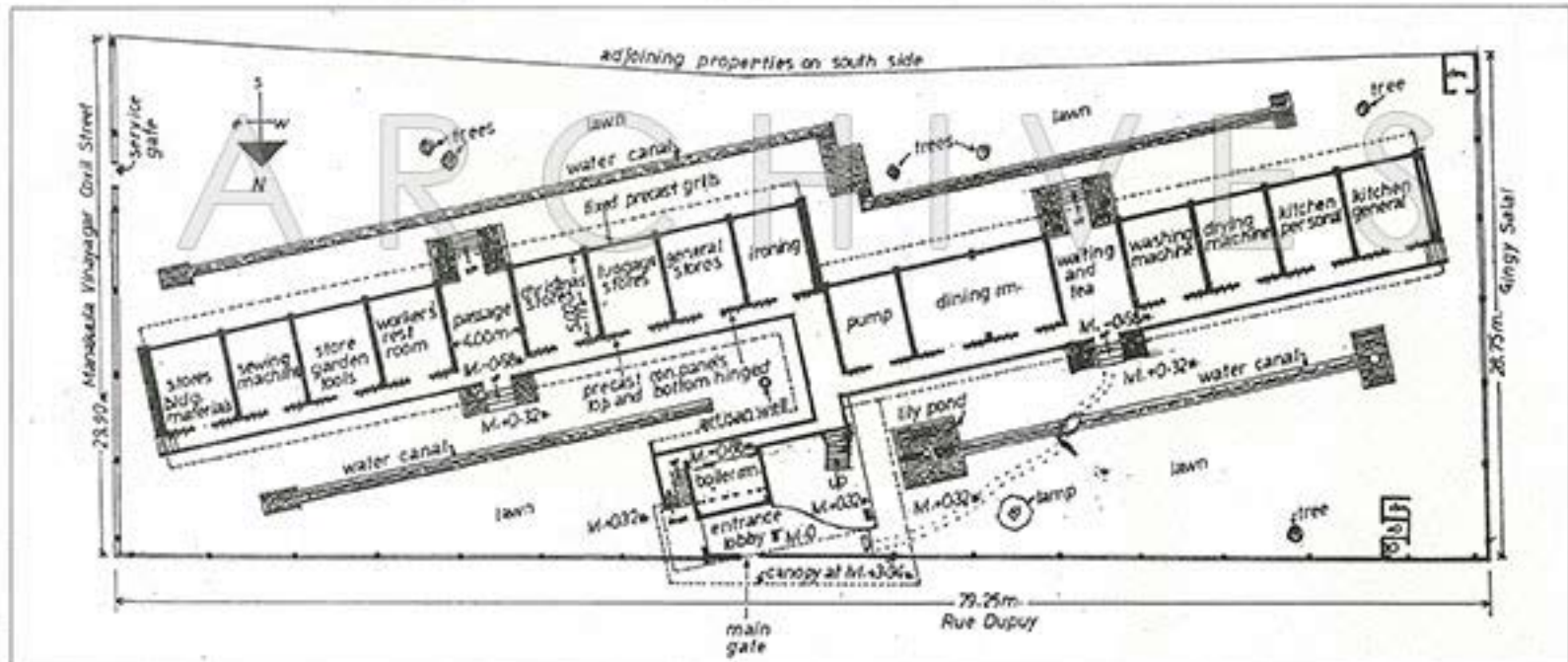
### Spaces

- 3 Floors with a semi-basement
- Number of rooms : 51
- Room Area : 22 m<sup>2</sup>
- Total Built up Area : 600 m<sup>2</sup> on each floor
- Plot Area : 2324 m<sup>2</sup>
- FAR : 0.774
- Orientation : Longer side facing 20° E of South
- Provision of filtered water and hot water

### Layout

- Long side facing ESE at an angle to the street.
- Western sun is shut off.
- Gardens are attractively laid out and being enclosed, become cloistered with cool and green ambience free from noise and dust.

Plan at the entrance and basement level





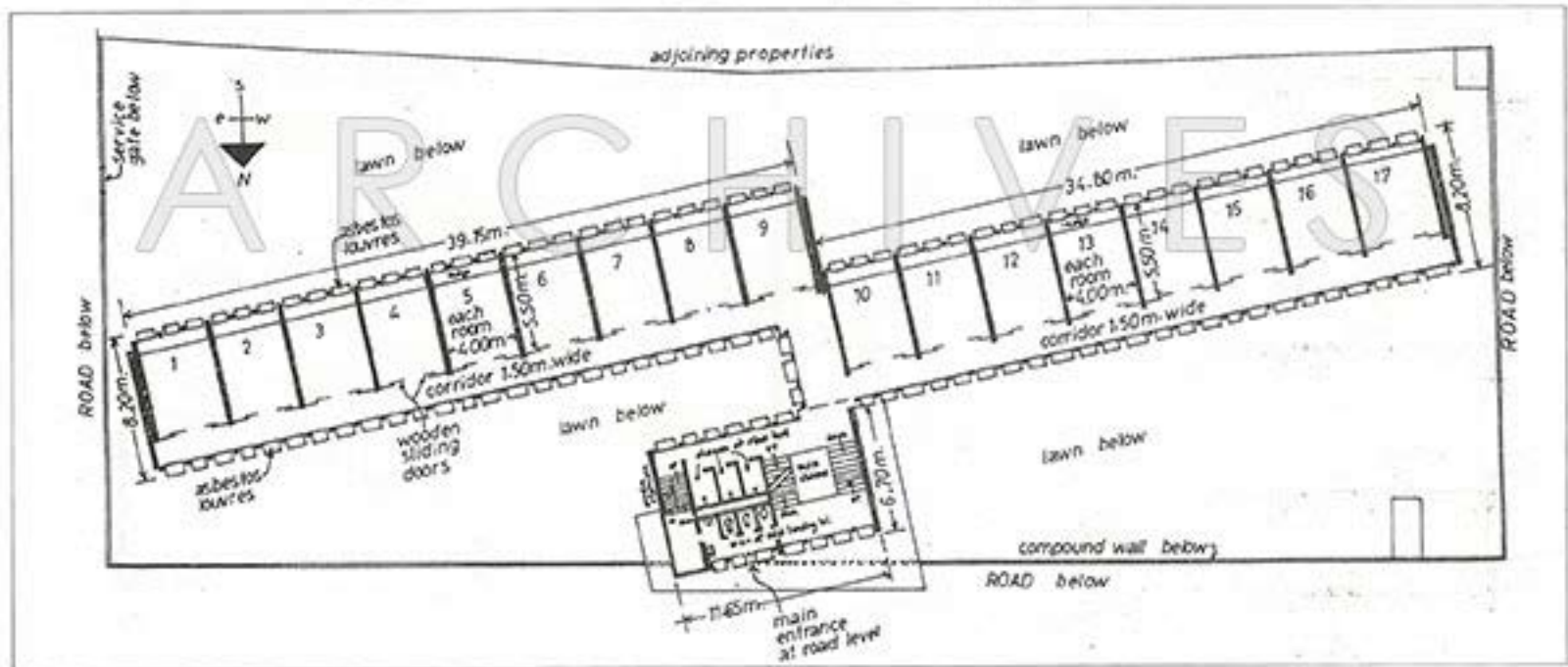
### Foundations

- Design Bearing Capacity of soil : 15 Tons/m<sup>2</sup> (Factor of safety used =4)  
East wing : sand at 1.2 m to 1.8 m below zero level  
West wing : mixed clay and sand
- From water level till -1.7 m , rammed sand in layers of 10 to 15 cm topped with 10 cm size granite rubble (rammed gently with a wooden hammer into sand till it could not be displaced) and a layer of mortar upon which footings were laid for columns at a uniform depth of 1.7 m.
- Floor is highly polished cuddapah stone tiles 25 X 25 inches with 5 mm butt joints.

### Structure

- Independent column & footing in high strength R.C.C. with all concrete surfaces left form finished without plaster. Verticals are correct within 3 mm off the plumb giving perfect butt joints.
- Roof and slabs are laid on brick partition walls and cantilevered for corridors.
- R.C.C. roof with pre-cast curved tiles on the top with a ventilated air space over the deck.

Plan at first and second floor level



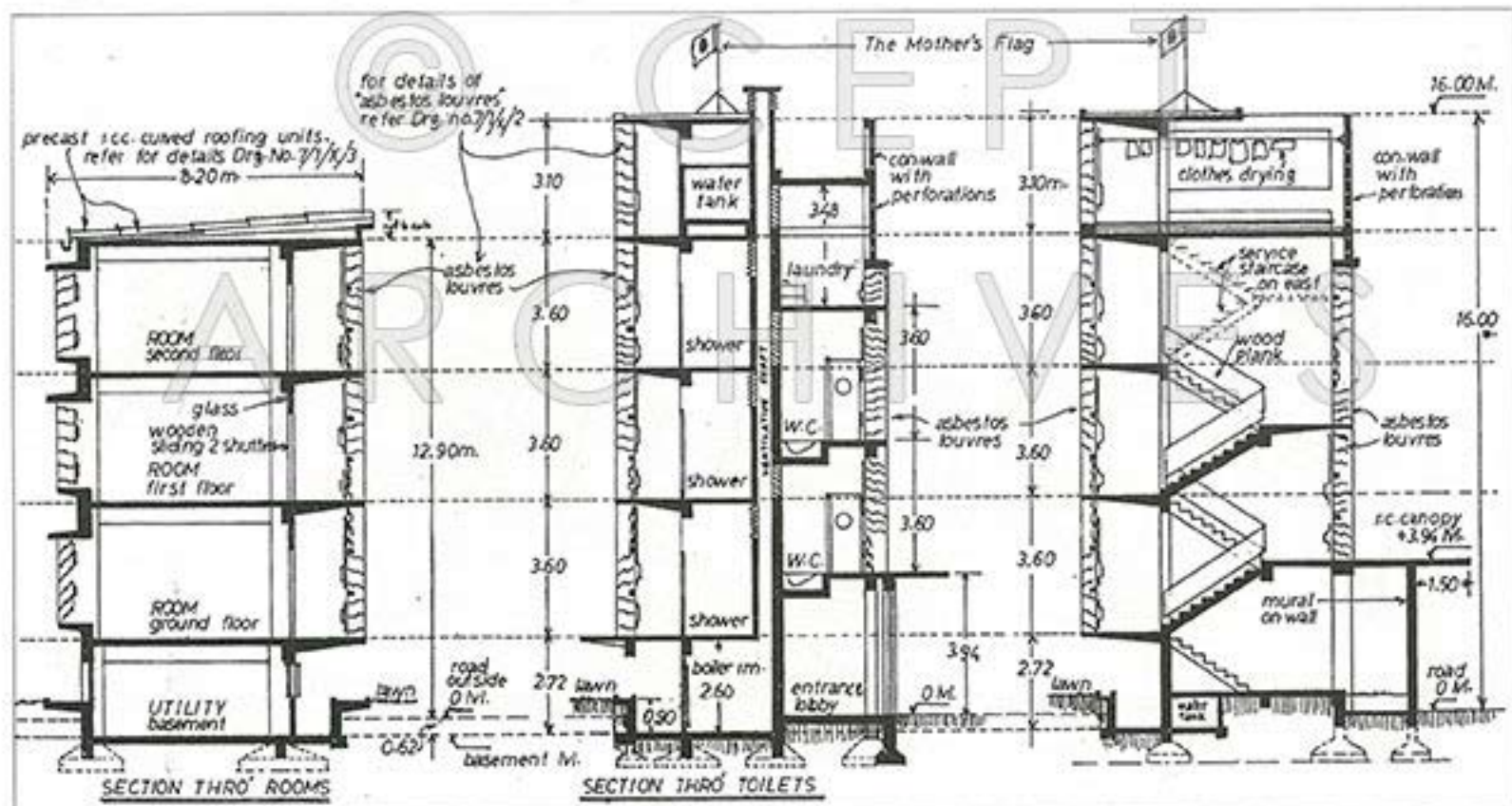
## Walls

- East and west walls are plastered with a highly reflective lime plaster and have no openings except at the end of corridors.
- Partition walls are made of bricks with special *chottinad* plaster.

## Doors

- Rooms are separated from corridor by sliding doors that allow air to circulate freely when open. They have staggered slats which allow ventilation even when doors are closed.
- Topmost part of all doors is a skylight with sliding glass panes which also allow for wind movement.

Sections

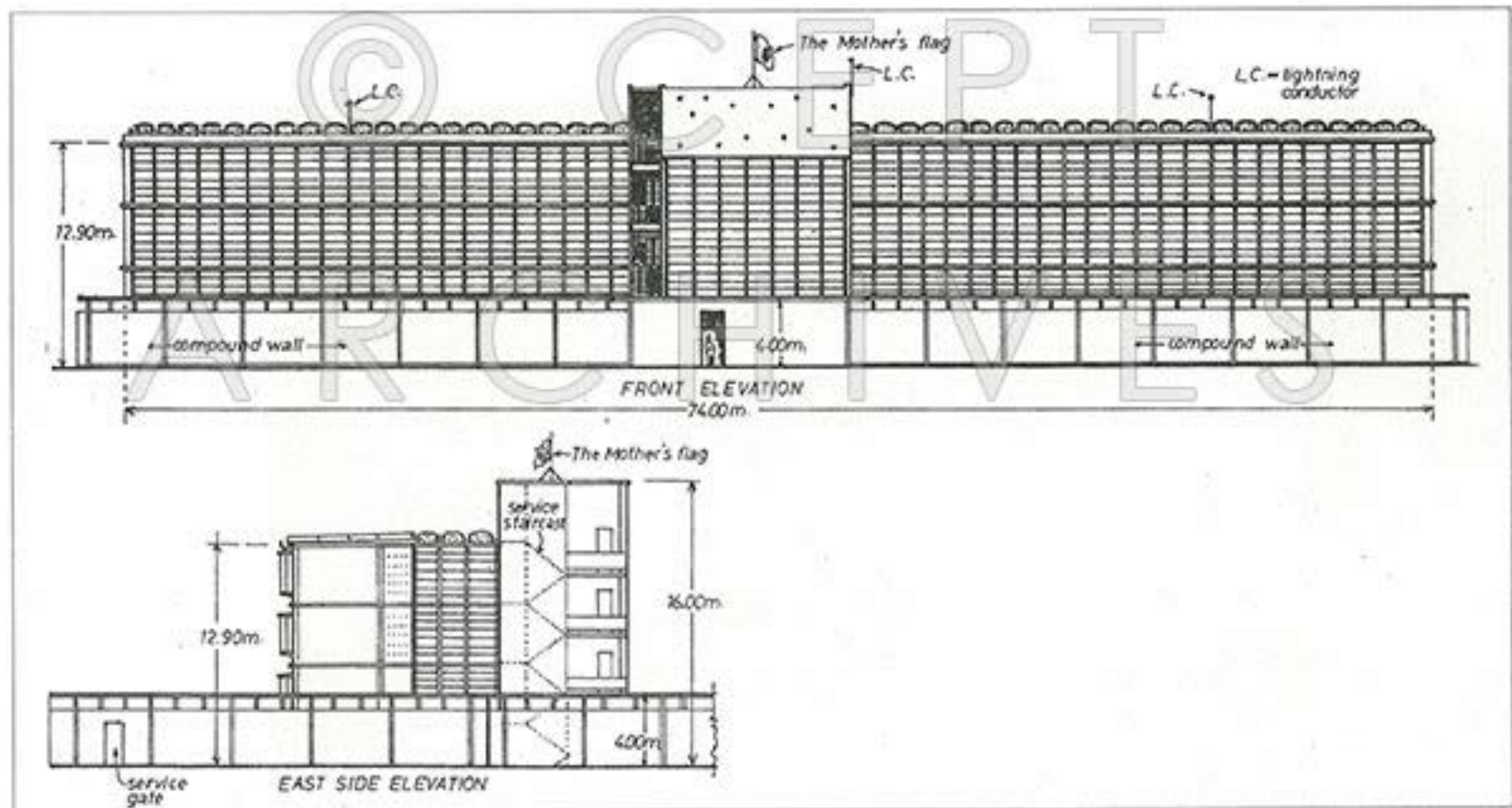




### Waterproofing

- Five layers of rubberoid waterproofing felt and sealants were used. They were imported by Parry and Co. of Chennai.
- First layer of felt was kept loose over the deck and anchored only at the perimeter to provide for thermal expansion.

### Elevations



## The Mother about Golconde

"Golconde is not a guest house. It is a dormitory (*dortoir*) in which those who reside there can meditate and do their sadhana in beautiful surroundings, in very fine rooms and with many of the little daily jobs done for them, to keep them more free for their sadhana. In the old days, the Rishis used to live in the mountains and their disciples lived in caves in these mountains. Golconde is the modern equivalent of the caves for the Integral Yoga of Sri Aurobindo."



The southern garden



### Excerpt from a letter of Sri Aurobindo

"As regards Golconde and its rules – they are not imposed elsewhere – there is a reason for them and they are not imposed for nothing. In Golconde Mother has worked out her own idea through Raymond, Sammer and others. First Mother believes in beauty as a part of spirituality and divine living; secondly, she believes that physical things have the Divine Consciousness underlying them as much as living things; and thirdly that they have an individuality of their own and ought to be properly treated, used in the right way, not misused or improperly handled or hurt or neglected so that they perish soon or lose their full beauty or value; she feels the consciousness in them and is so much in sympathy with them that what in other hands may be spoilt or wasted in a short time lasts with her for years or decades. It is on this basis that she planned the Golconde. First she wanted a high architectural beauty, and in this she succeeded – architects and people with architectural knowledge have admired it with enthusiasm as a remarkable achievement; one spoke of it as the finest buildings of its kind he had seen, with no equal in all Europe or America; and a French architect, pupil of a great master, said it executed superbly the idea which his master had been seeking for but failed to realise; but also she wanted all the objects in it, the rooms, the fittings, the furniture to be individually artistic and to form a harmonious whole. This too was done with great care. Moreover, each thing was arranged to have its own use, for each thing there was a place, and there should be no mixing up, or confused or wrong use. But all this had to be kept up and carried out in practice; for it was easy for people living there to create a complete confusion and misuse and to bring everything to disorder and ruination in a short time. That was why the rules were made and for no other purpose. The Mother hoped that if right people were accommodated there or others trained to a less rough and ready living than is common, her idea could be preserved and the wasting of all the labour and expense avoided..."

February 25, 1945

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Notes

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Facing page: *Garden Sunny and Calm*, a painting by Krishnalal  
Back cover: *Earliest proposal for elevation*, a painting (Antonin Raymond)









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