

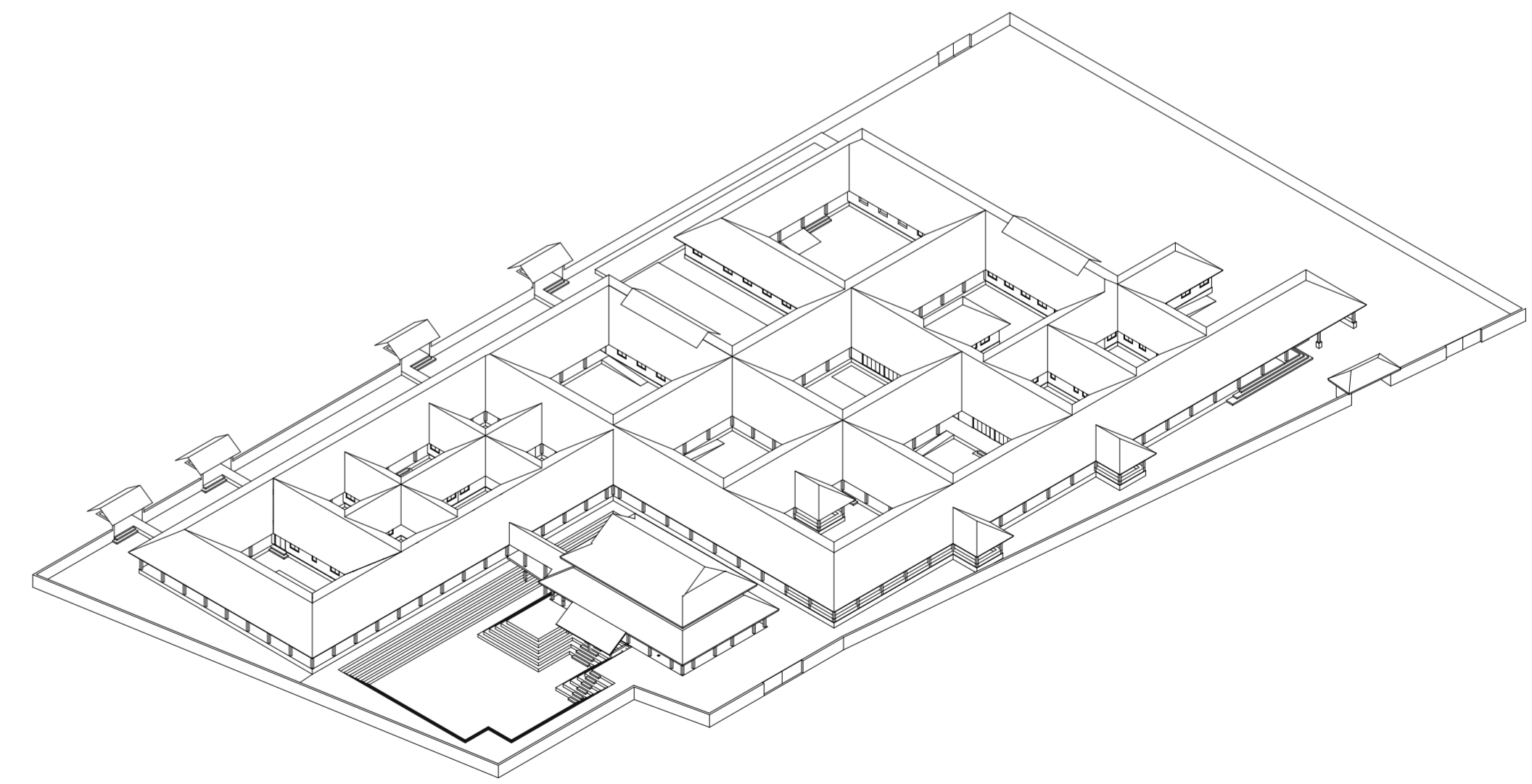
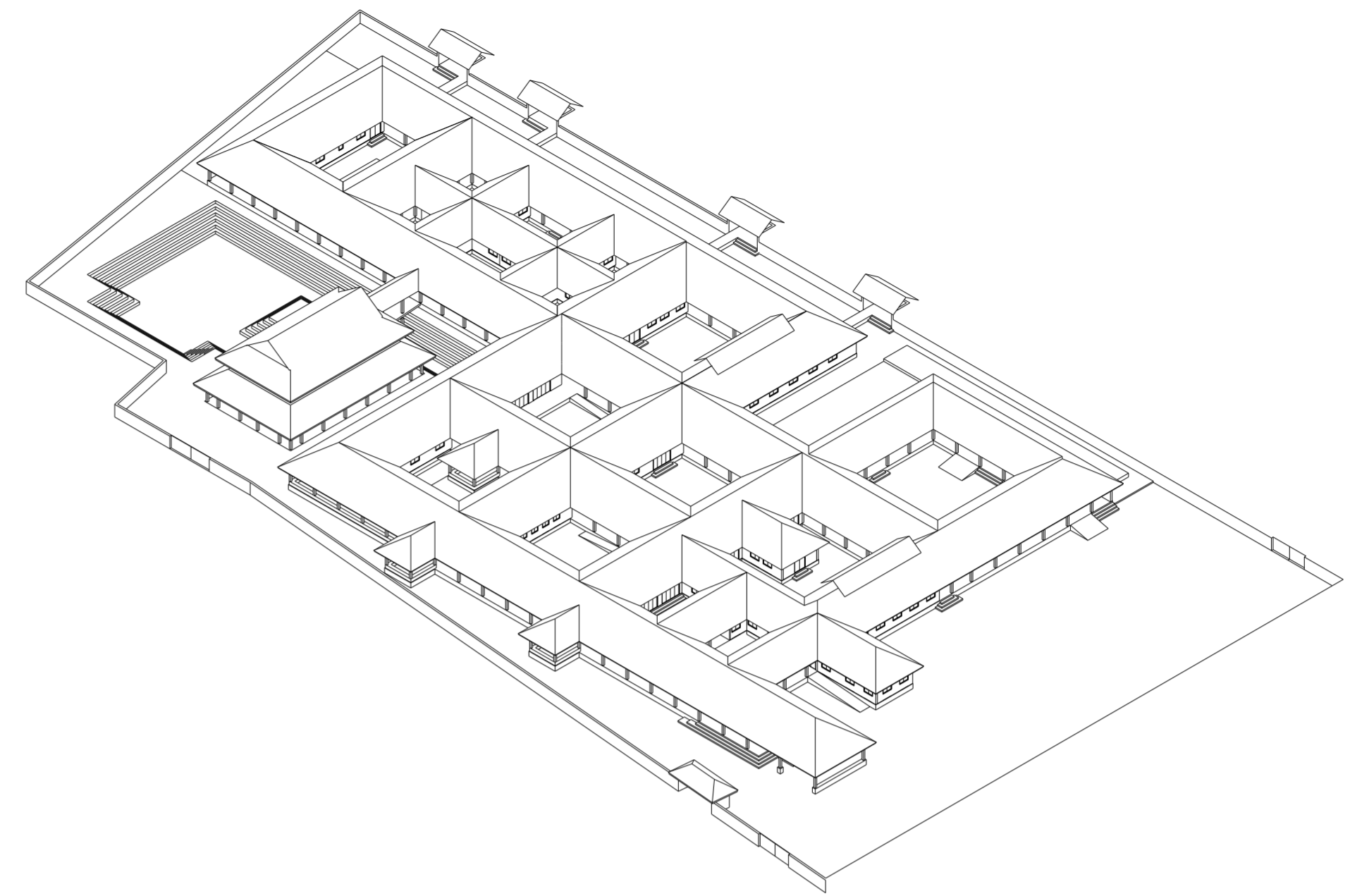
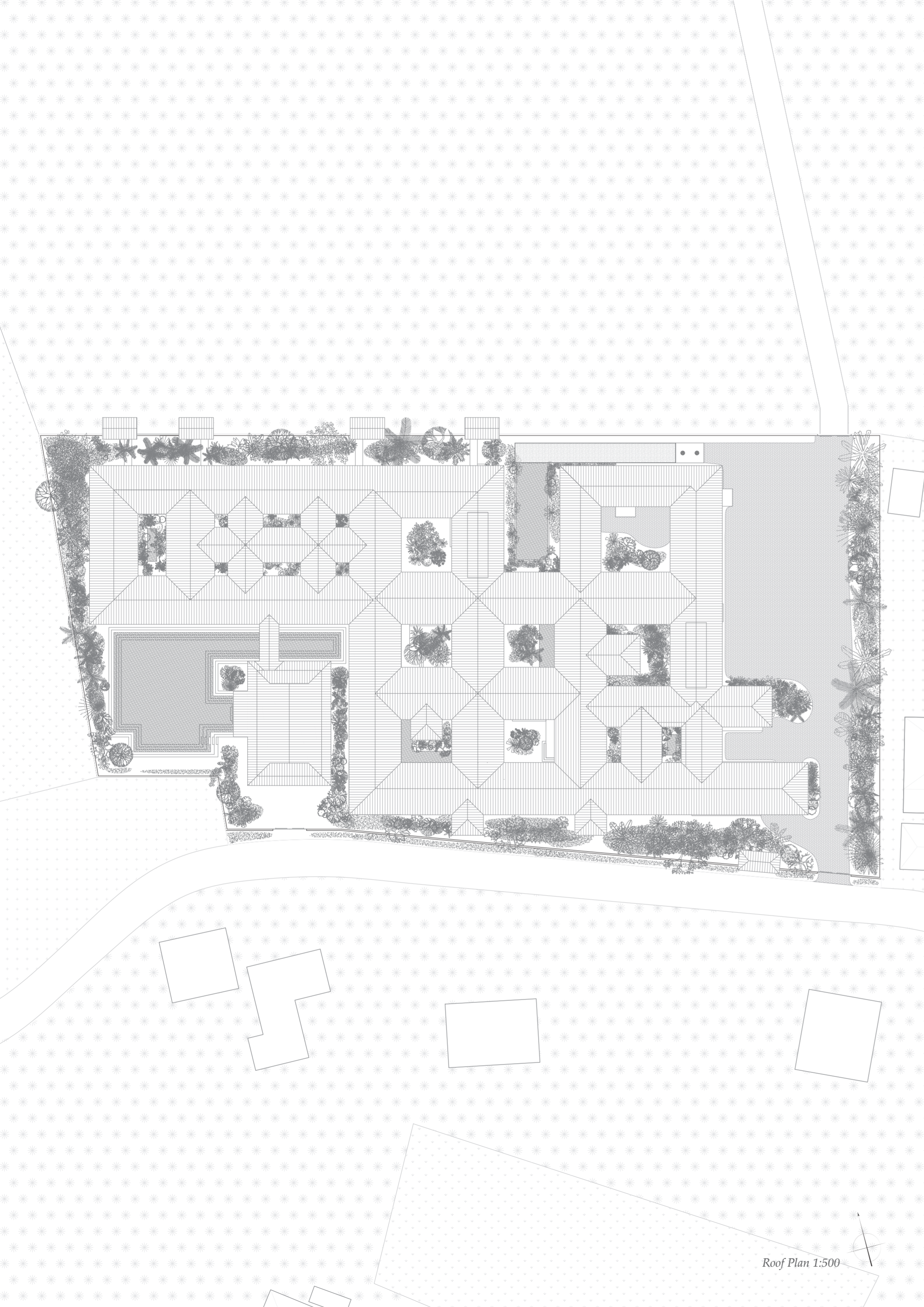
ĀŚVĀSAM

Palliative & Dialysis Community Clinic



Design Booklet
Kevin Kuriakose
AHO
2019





Roof Plan 1:500

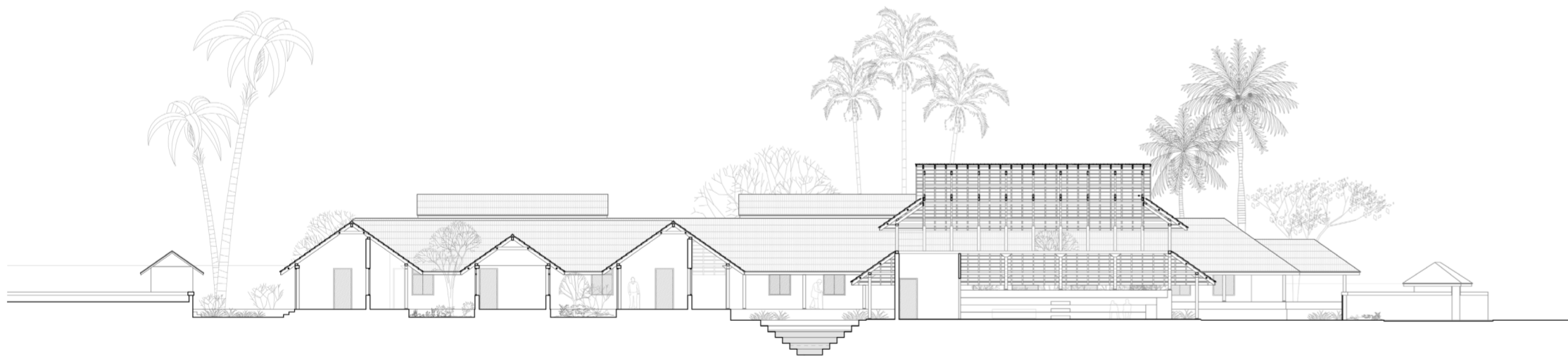


Public transport is usually provided by the a government agency but there are also private transport buses that run frequently between towns and cities.

Arrival Porch needs to be provided so that people can exit into the building without getting wet during the monsoon.

Laterite Compound Wall

Buildings in Kerala usually have compound walls not only for security but also to prevent cows and other animals from wandering into the property.





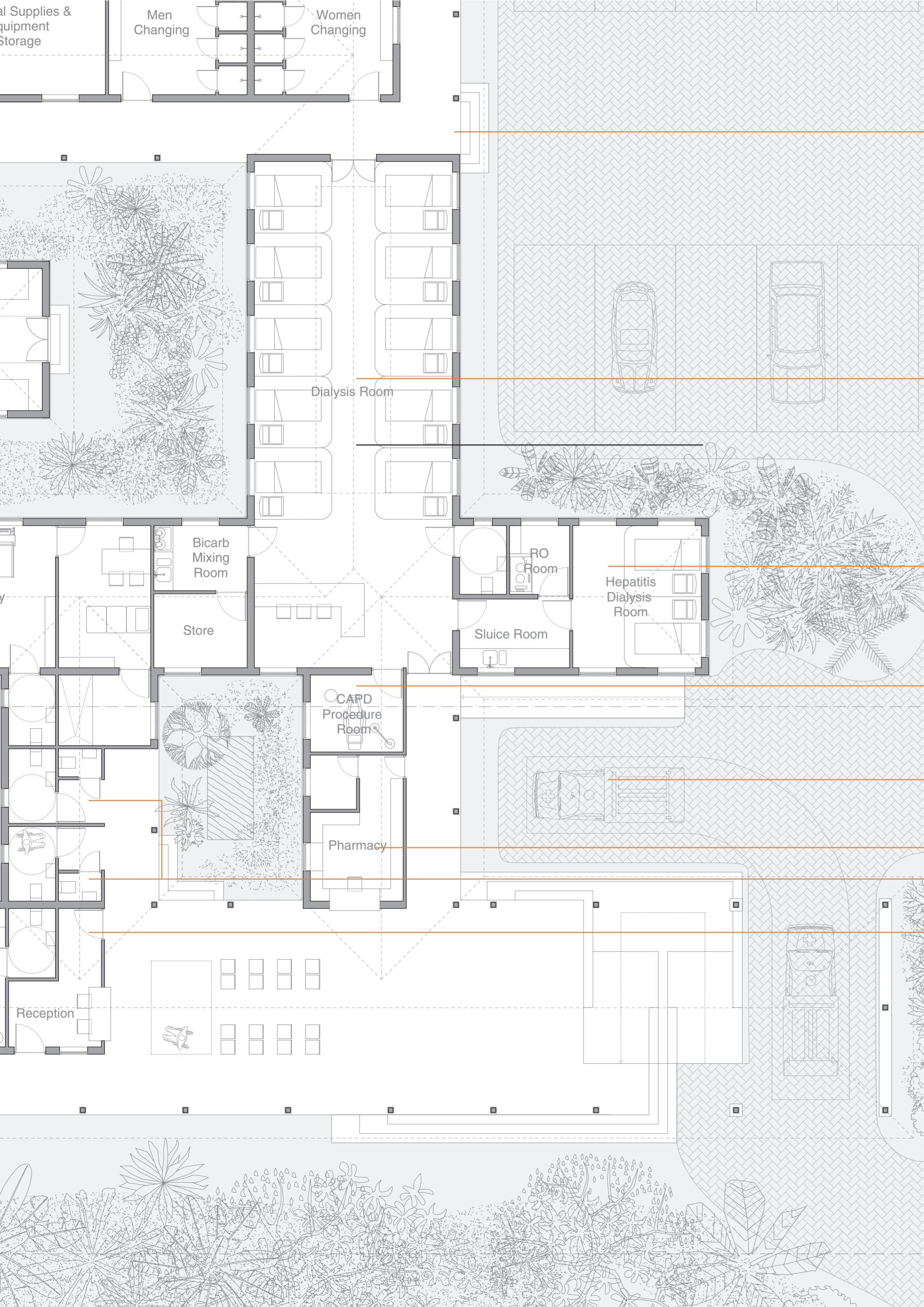
Elevation AA' 1:200



Section BB' 1:200



Section CC' 1:200



Staff Entrance

Dialysis room is designed to allow for maximum ventilation using a double roof. Patients typically spend around 5 hours during a session. Two shifts will be accommodated per day.

Separate dialysis room with separate equipment and a dedicated staff member is required for patients with hepatitis.

Small procedure room for Continuous ambulatory peritoneal dialysis (CAPD) which is a type of dialysis that allows users more flexibility as it can be done at home. It is slowly gaining traction in India as an alternative to traditional Haemodialysis.

Ambulance service placed close to the dialysis unit in case a patient in distress needs to be taken to the nearest hospital.

Pharmacy with separate morphine store

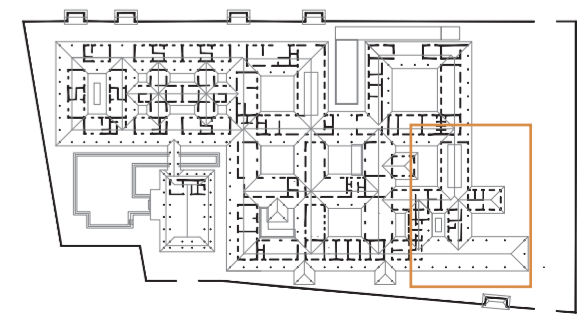
Separate toilets for men and women

Small storage space for wheelchairs

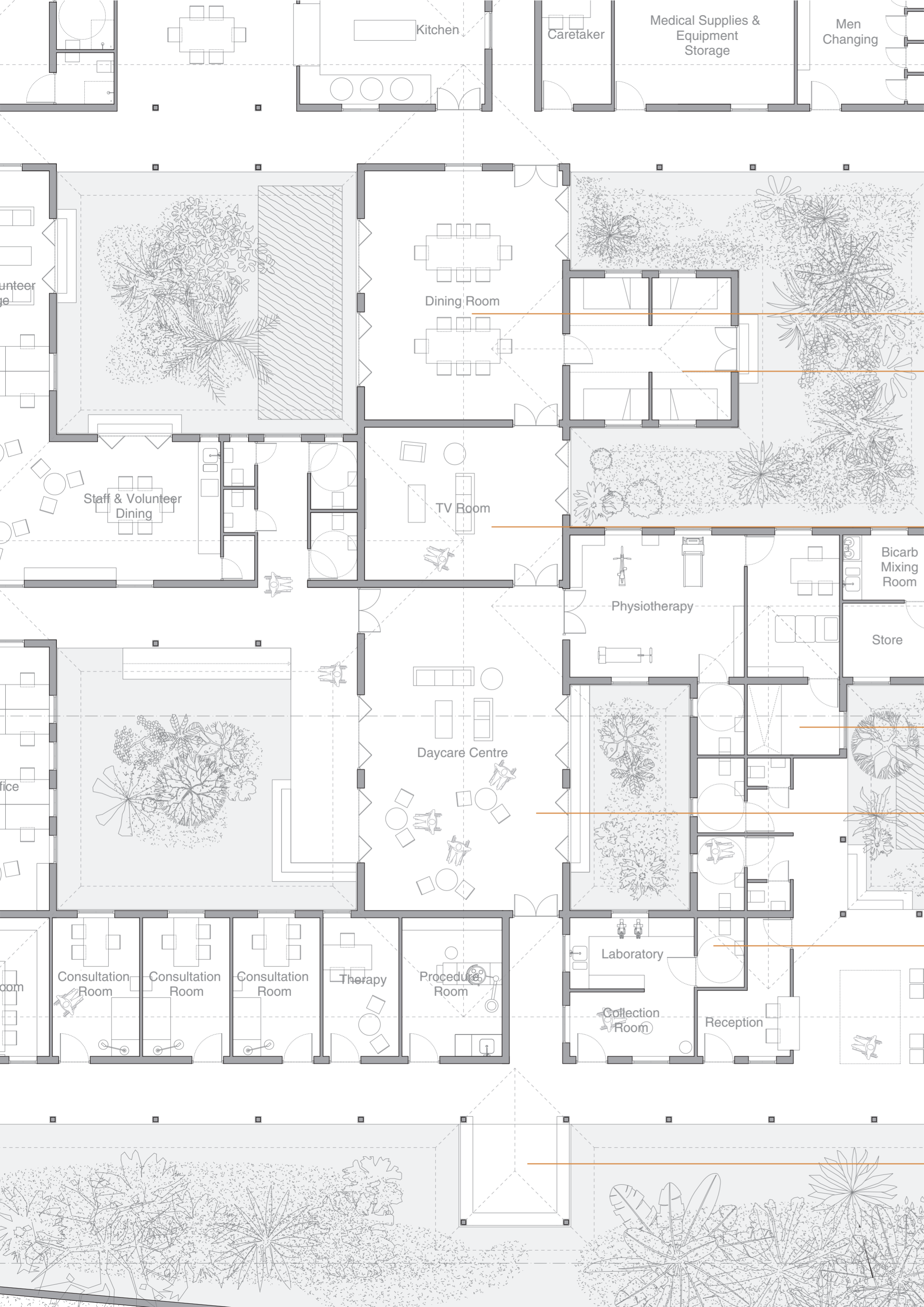


Haemodialysis Machine

Haemodialysis is the process by which blood is purified using a machine for people who are suffering from renal failure. It is usually a temporary measure until a more permanent solution can be arrived at such as kidney transplantation. This is a problem in India since there are very strict rules regarding organ donation in India. Only close family members are allowed to donate to prevent exploitation of individuals and to prevent organ trades. Due to this many have to make frequent trips (2 or 3 times a week) to undergo dialysis.



Reception and Dialysis Area Plan 1:100



A palliative day unit is designed for patients being cared for at home. In India it is a legal obligation that children care for their parents. This is sometimes really hard when the elderly requires a lot of care especially poor families who are unable to hire servants or extra help. To alleviate this a day care unit is proposed where volunteers and staff can enable them to receive attention to all aspects of their illness and suffering and provide a social environment during the day.

Dining room is situated close to the kitchen

Small resting room for people need to lie down during the day

Malayalam movies (Mollywood) and daytime television is very popular in Kerala.

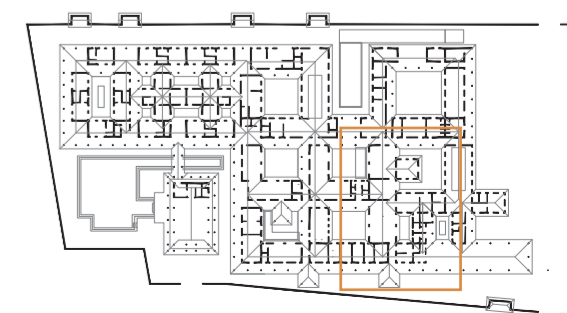
Hydrotherapy room

A multipurpose space for socialising/ music/art therapy.

Toilet for sample collection

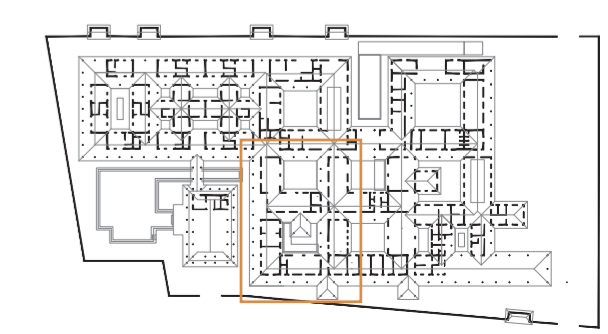
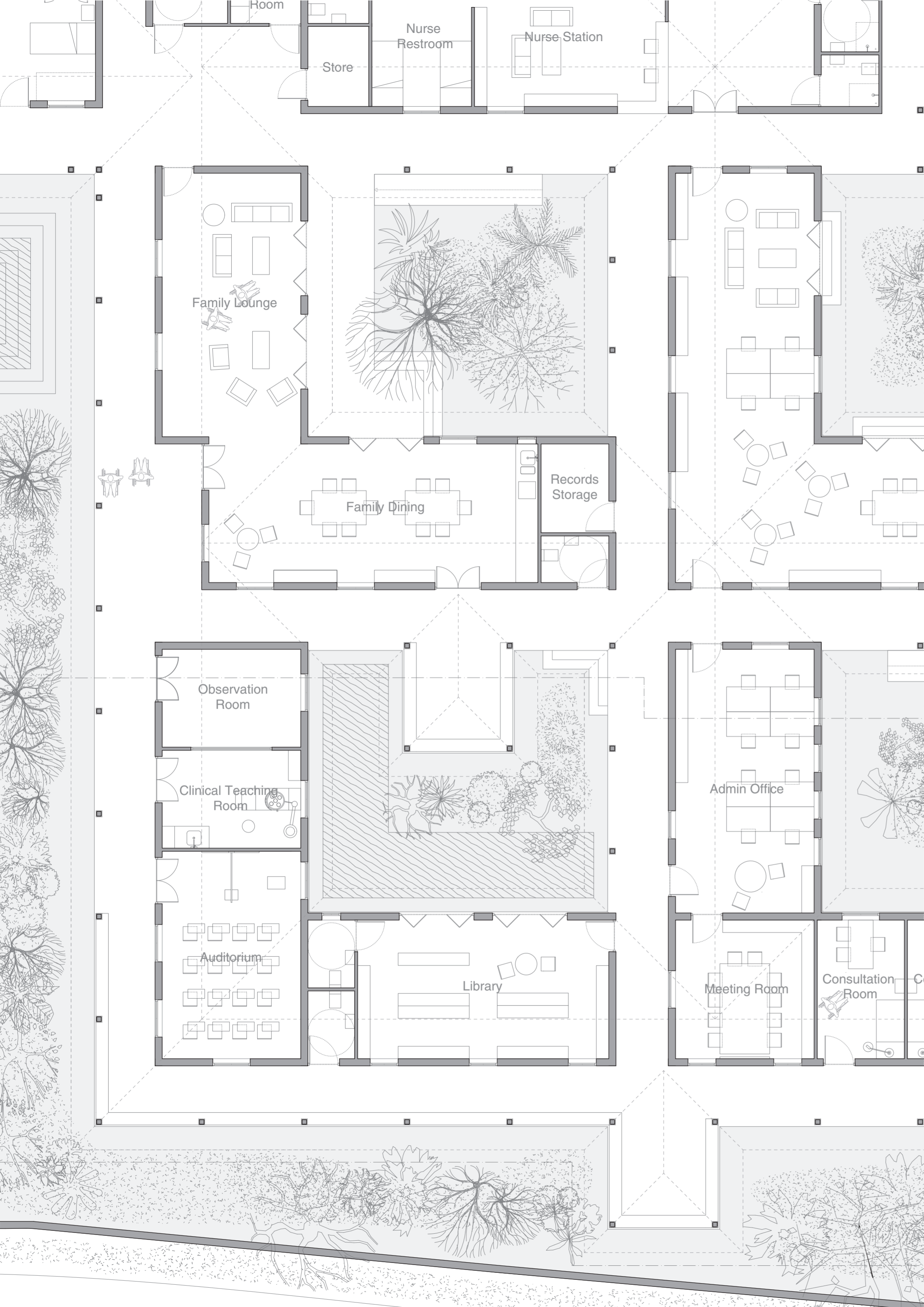
Outpatient clinics will be staffed by trained palliative care doctors. There is a procedure roof for small procedure and small lab that can run basic test on the patient. More demanding tasks can be referred to the nearest hospital.

Small waiting area with built in seating

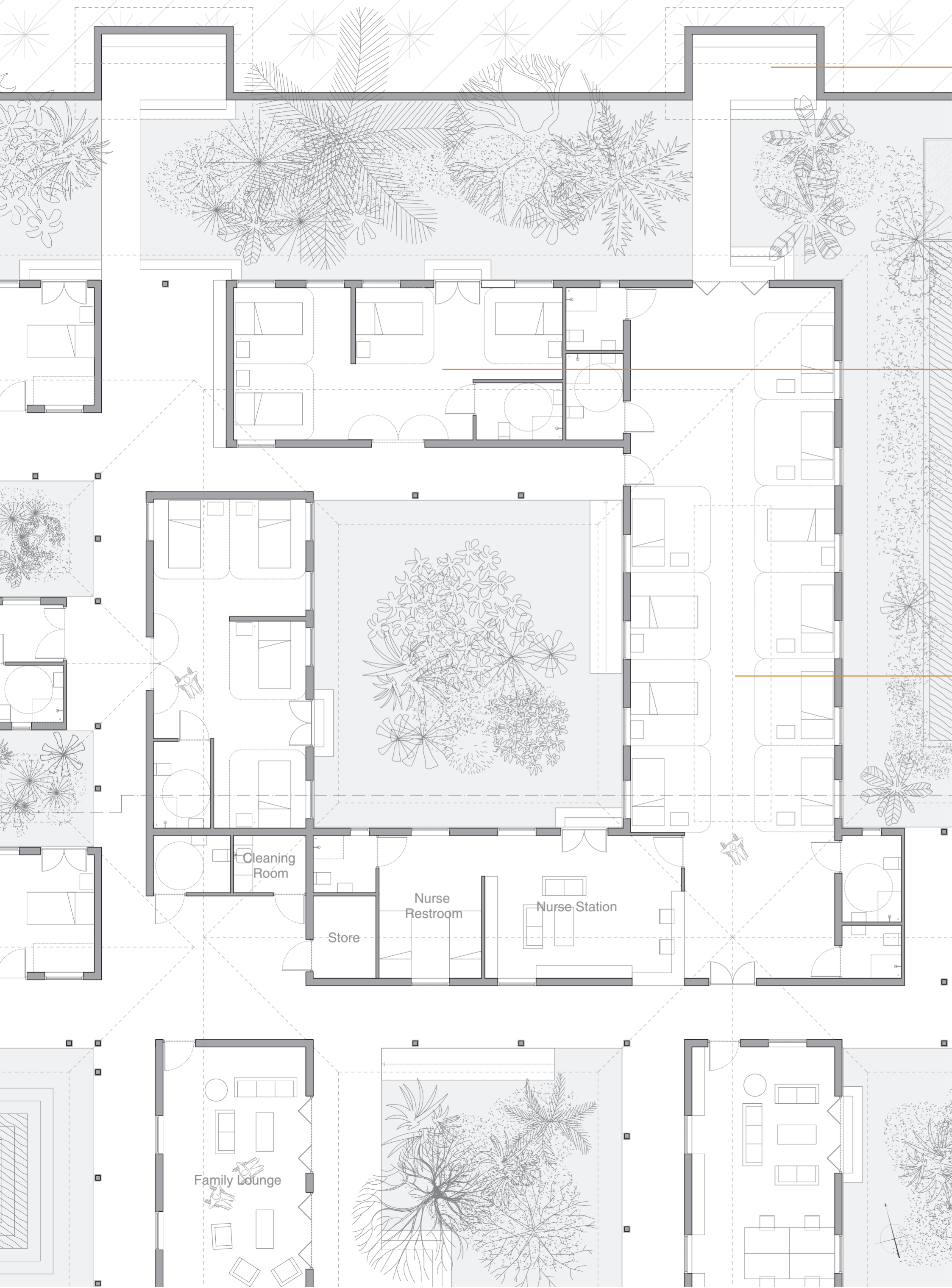


Daycare and Outpatient Area Plan 1:100





Daycare and Outpatient Area Plan 1:100



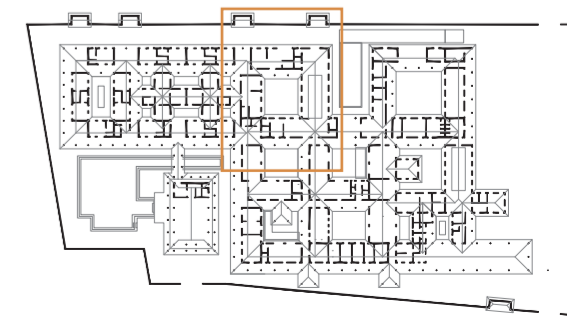
Secluded reflection spaces

The 4-bed ward is gendered and will be utilised for individuals who want more privacy.

General 10 bed Nightingale ward allows for easy observation and allows for patient to patient interaction and is suitable for patients who have short stays. Privacy is provided by curtains and it is most convenient for patients who are on their own. The beds can be rotated to provide or a view to the outside or to facilitate conversations with fellow patients.

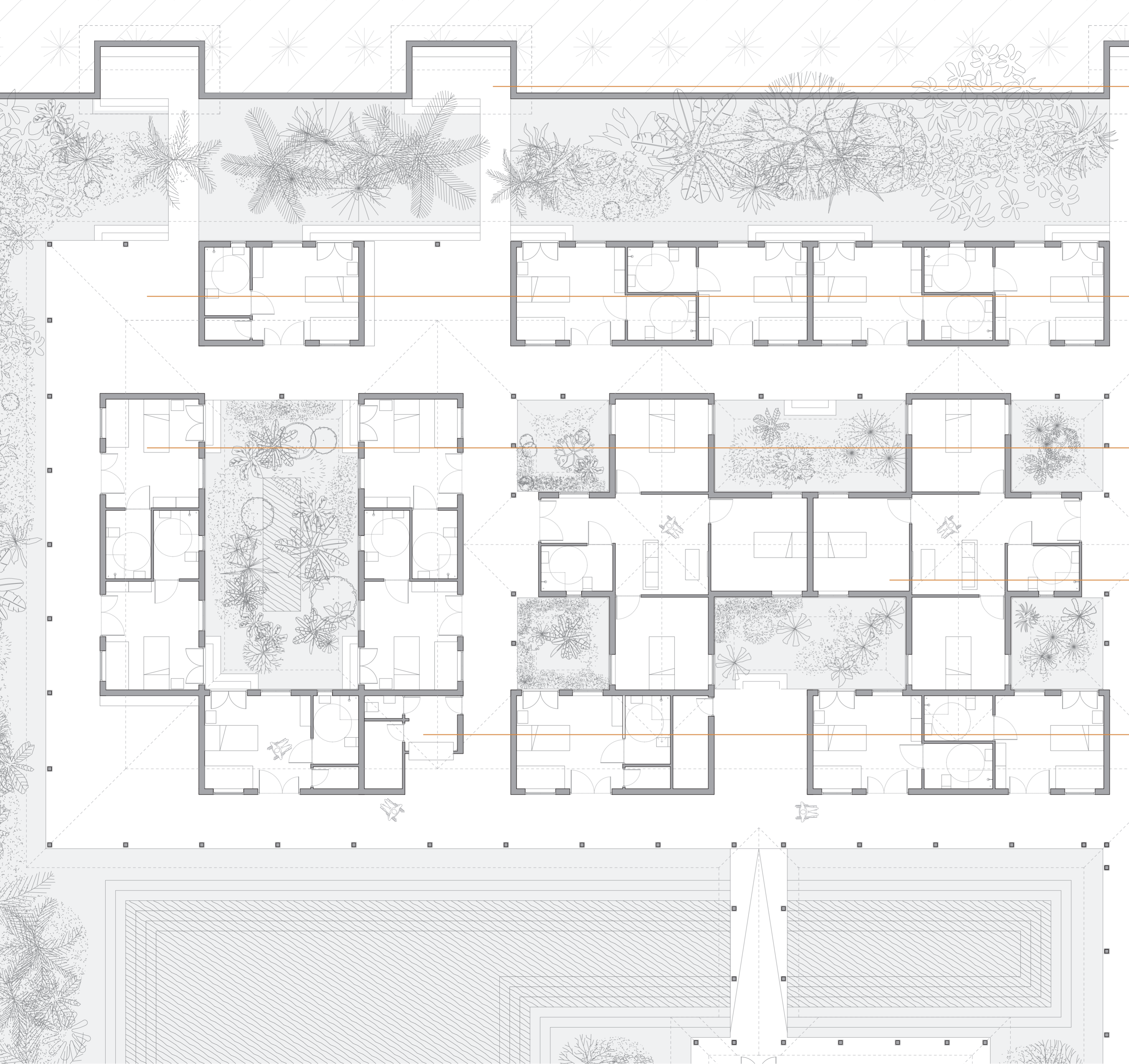
The space is mixed gender though there are two separate gendered bathrooms.

A variety of wards were designed so that maximum flexibility can be achieved as the patients who are admitted come from various backgrounds and having varying needs. Healthcare costs in Kerala is complicated and it will be up to the doctors to decide what kind of ward the patient needs to be admitted in.



Ward Area Plan 1:100





Secluded reflection spaces

During the last stages of a person's life in India there will be a huge number of family members who will arrive to say their goodbyes. It is customary for the entire family to gather and wait for the person to take their last breath. These open spaces provide a space for them to gather without disrupting the corridors.

Single bedroom will be used for patients who are undergoing hospice or end of life care and for those who have very distressing symptoms or prefer isolation.

Three-bed ward with shared living room are for patients who need respite and want to socialize and perhaps spend longer stints at the hospice. There is one for each gender.

Small nurses station

Each of the rooms were designed to enable the occupant to have a view to the outside or a courtyard.







Planted Gravel Filter

Imhoff-Tank

Laundry

Laundry Drying Area During Monsoon

Soiled Utility Room

Generator

Linen Store

Clean Holding Room

Pantry

Laundry Drying Area

Long-term Storage

Kitchen

Caretaker

Medical Supplies & Equipment Storage

Men Changing

Women Changing

Dining Room

Decentralized waste water treatment system (Dewats)

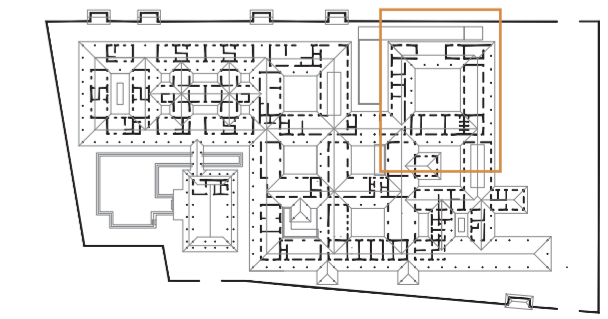
This area was laid out to prevent contamination.

Service entrance

Staff entrance



DEWATS



Service Area Plan 1:100



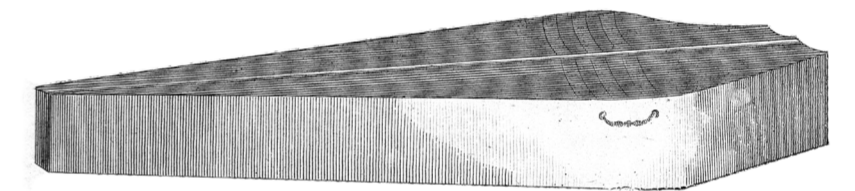
Different castes and religious groups in India have different ways of dealing with their dead. Some cremate, some bury them and some even leave the bodies out for the vultures to feed on.

Those of the Hindu faith prefer to die at home, surrounded by their family who will keep vigil. According to Hindu funeral customs, the body remains at the home until it is cremated, which is usually within 24 hours after death

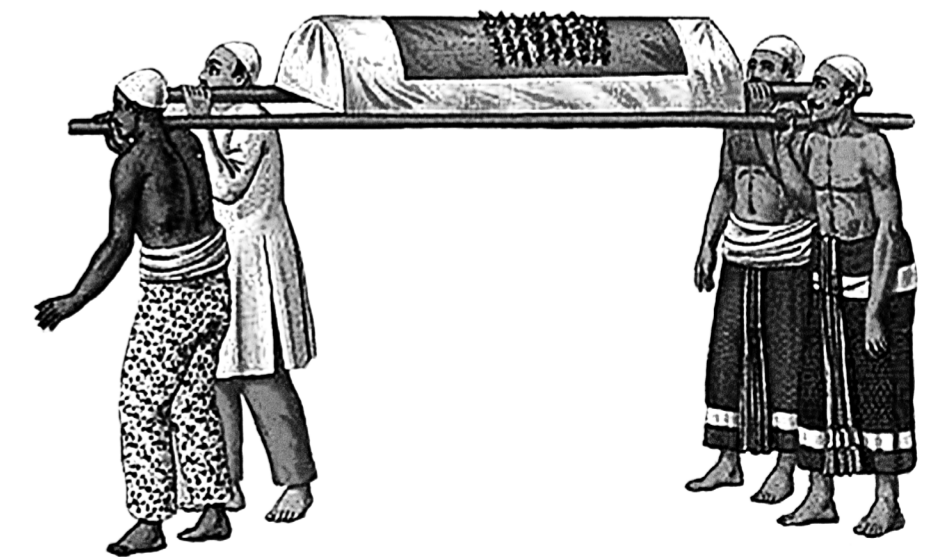


When an Orthodox Christian is preparing for death, the priest comes to hear the final confession and give Holy Communion, if the dying one is conscious.

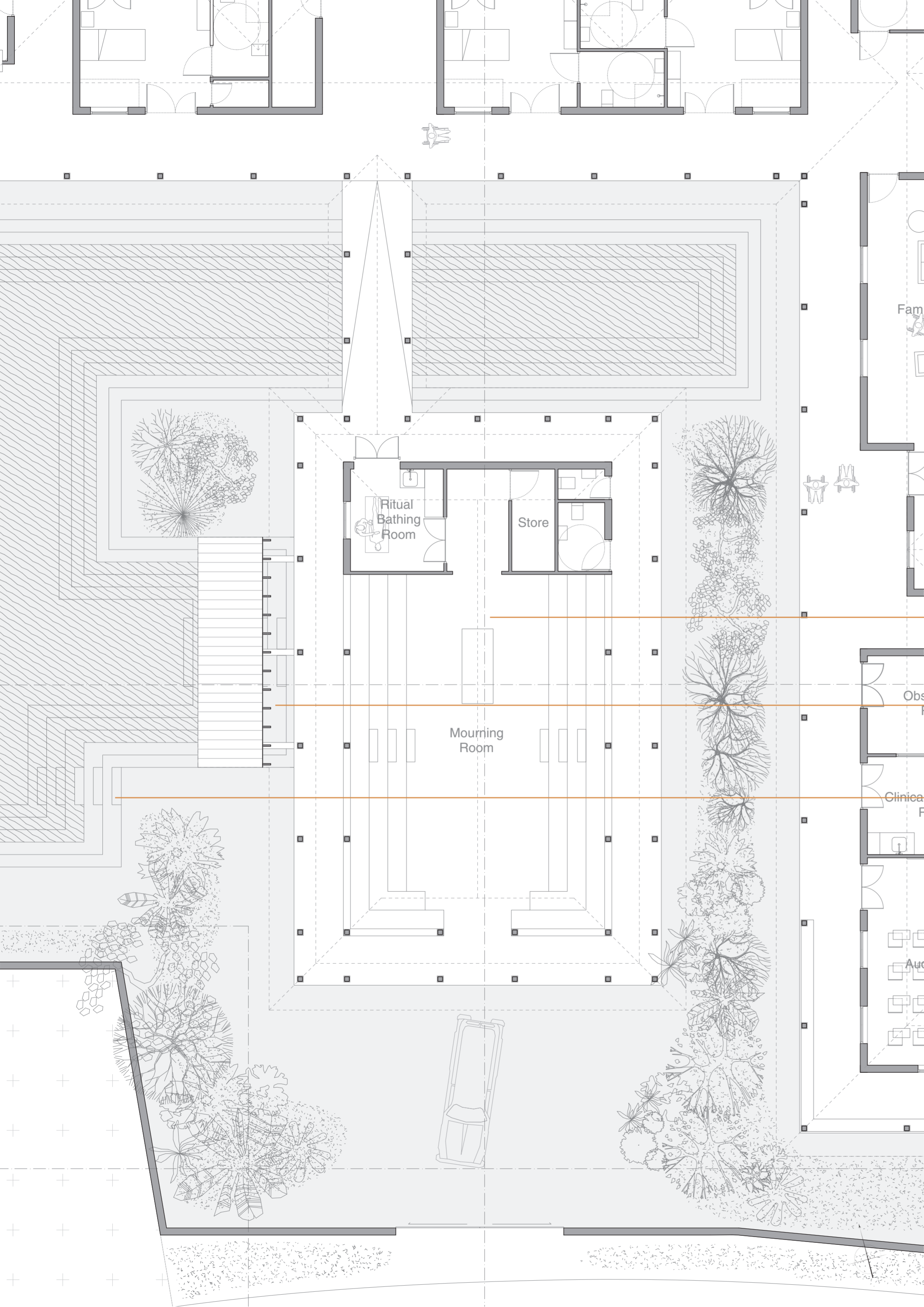
Immediately after death, a unique memorial service, called the 'First Pannikhida' is celebrated. After this, the body is washed and clothed for burial. Then the body is displayed and family and friends are expected to join in on prayers and saying goodbye to the dead.



Funerals in Islam follow fairly specific rites, though they are subject to regional interpretation and variation in custom. In all cases, however, sharia (Islamic religious law) calls for burial of the body as soon as possible, preceded by a simple ritual involving bathing and shrouding the body, followed by salah (prayer). Burial is usually within 24 hours of death to protect the living from any sanitary issues, except in the case of a person killed in battle or when foul play is suspected; in those cases it is important to determine the cause of death before burial.



The mourning room



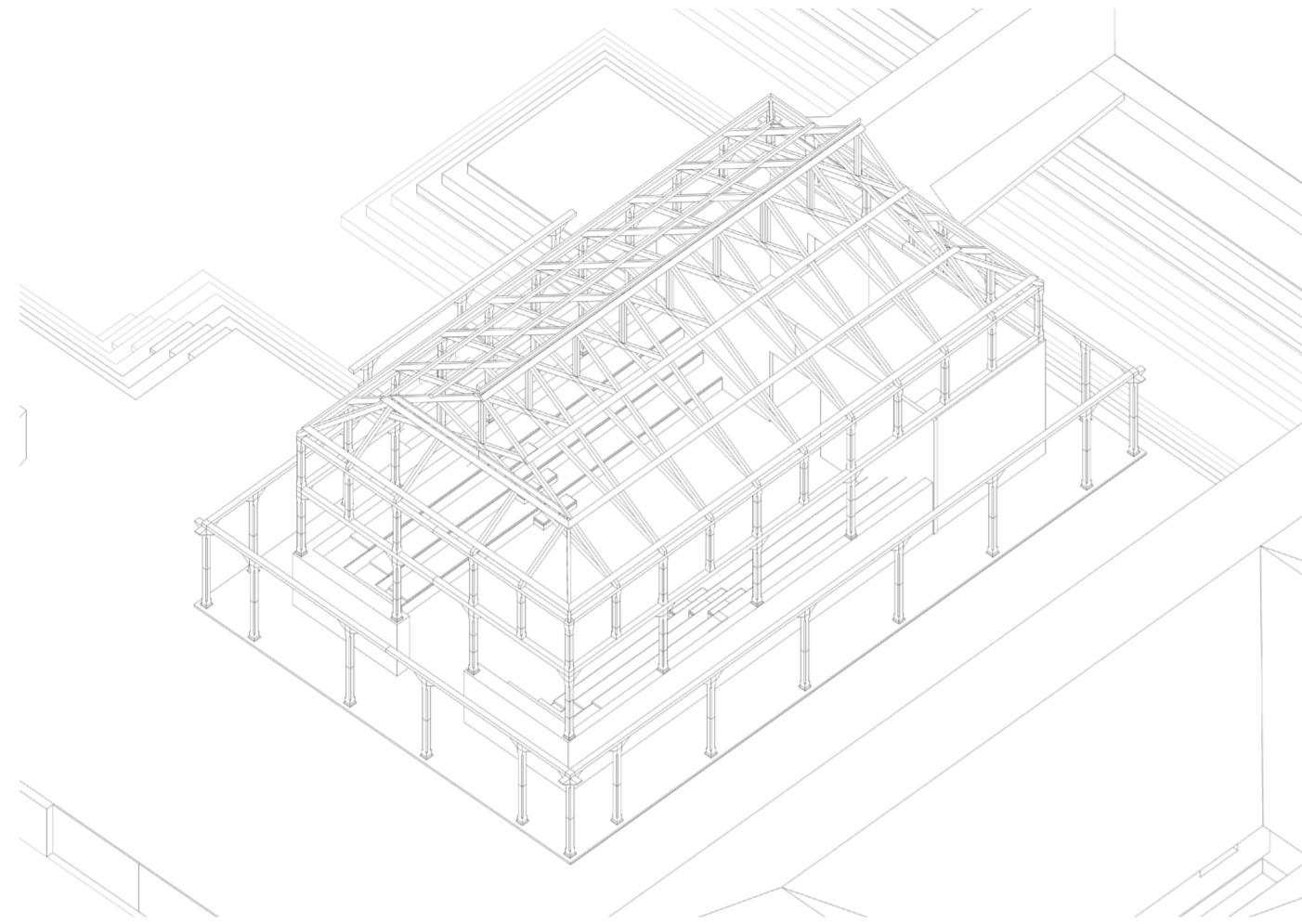
The mourning room was designed to be a secular space to mourn the dead. The design is based on a traditional Koothambalam, or temple theatre where people of different religions and caste gather to watch traditional performances.

The mourning room can be used by various religious groups as a gathering space to mourn the dead and can even be used by the local community for traditional performances.

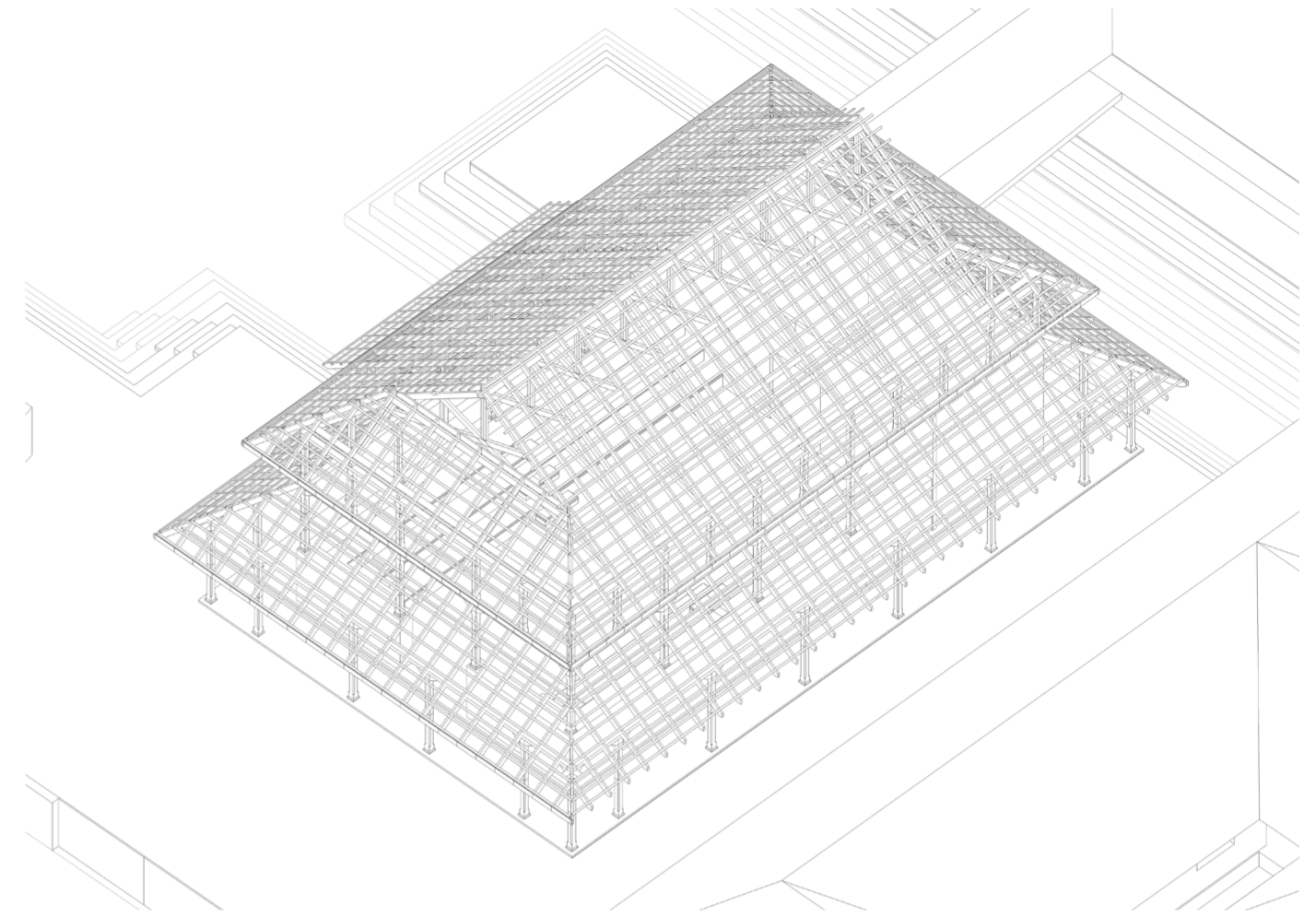
Secluded reflection spaces

The lotus pond serves the community as an emergency water supply for livestock during droughts

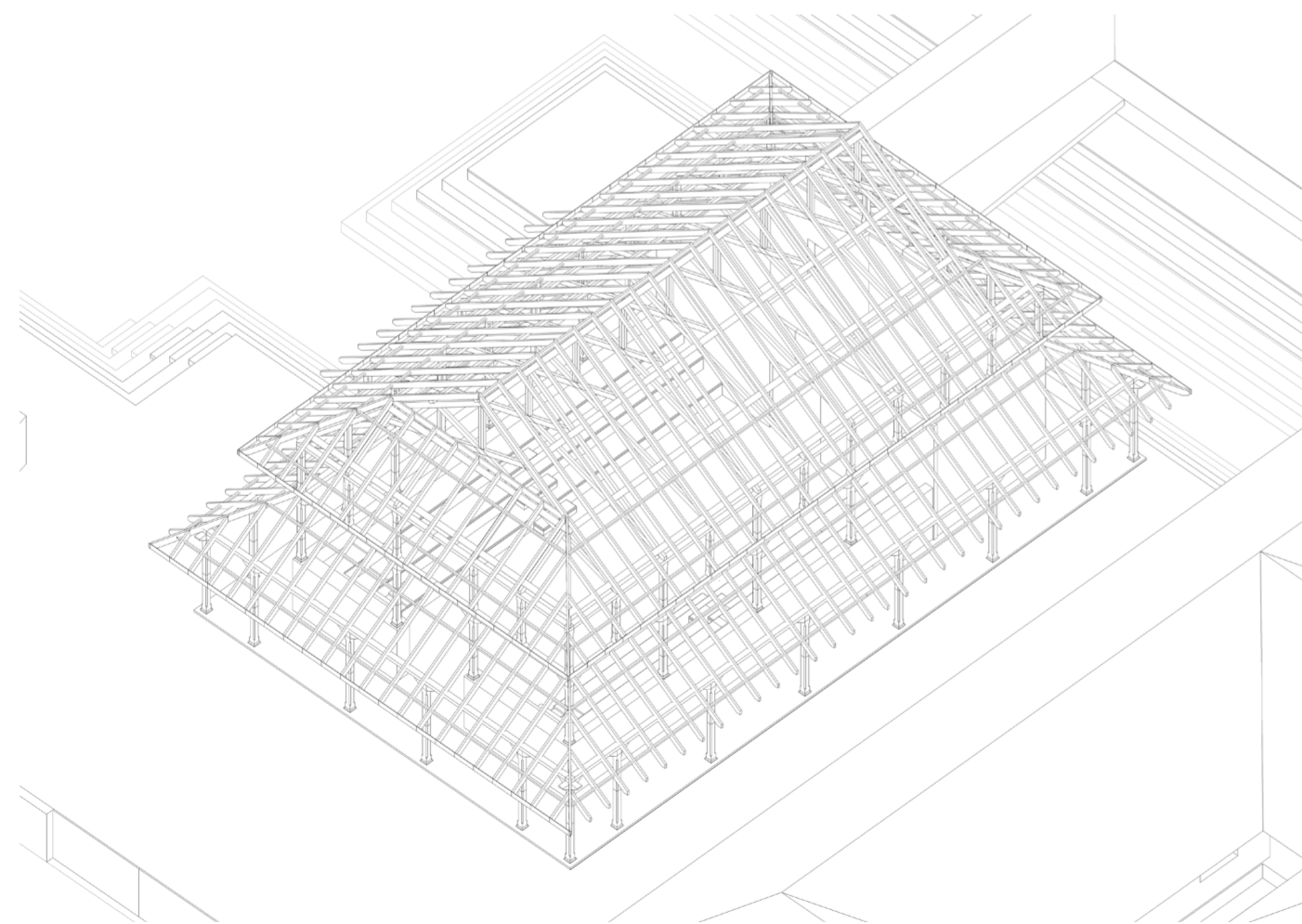




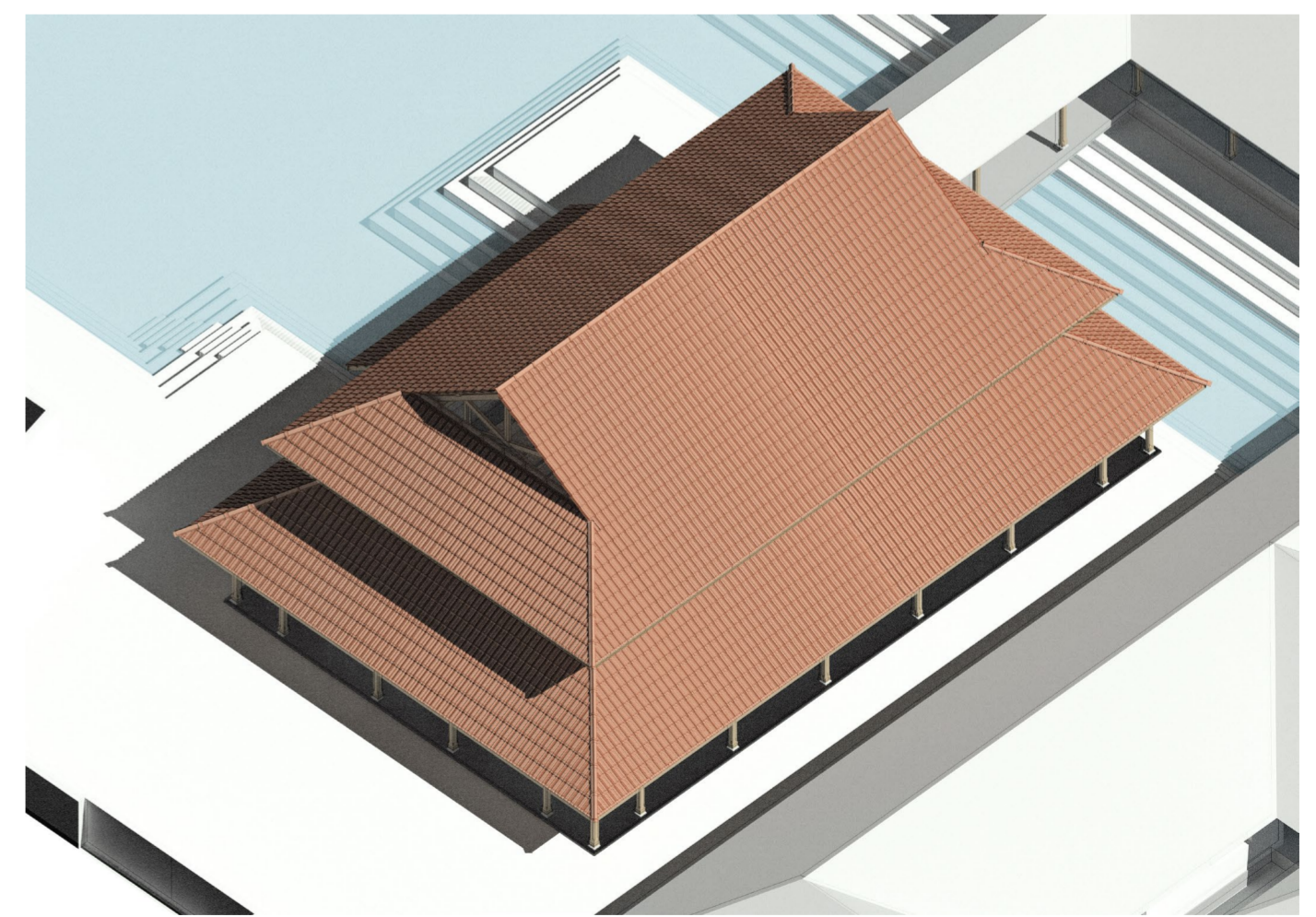
Scissor truss and purlins



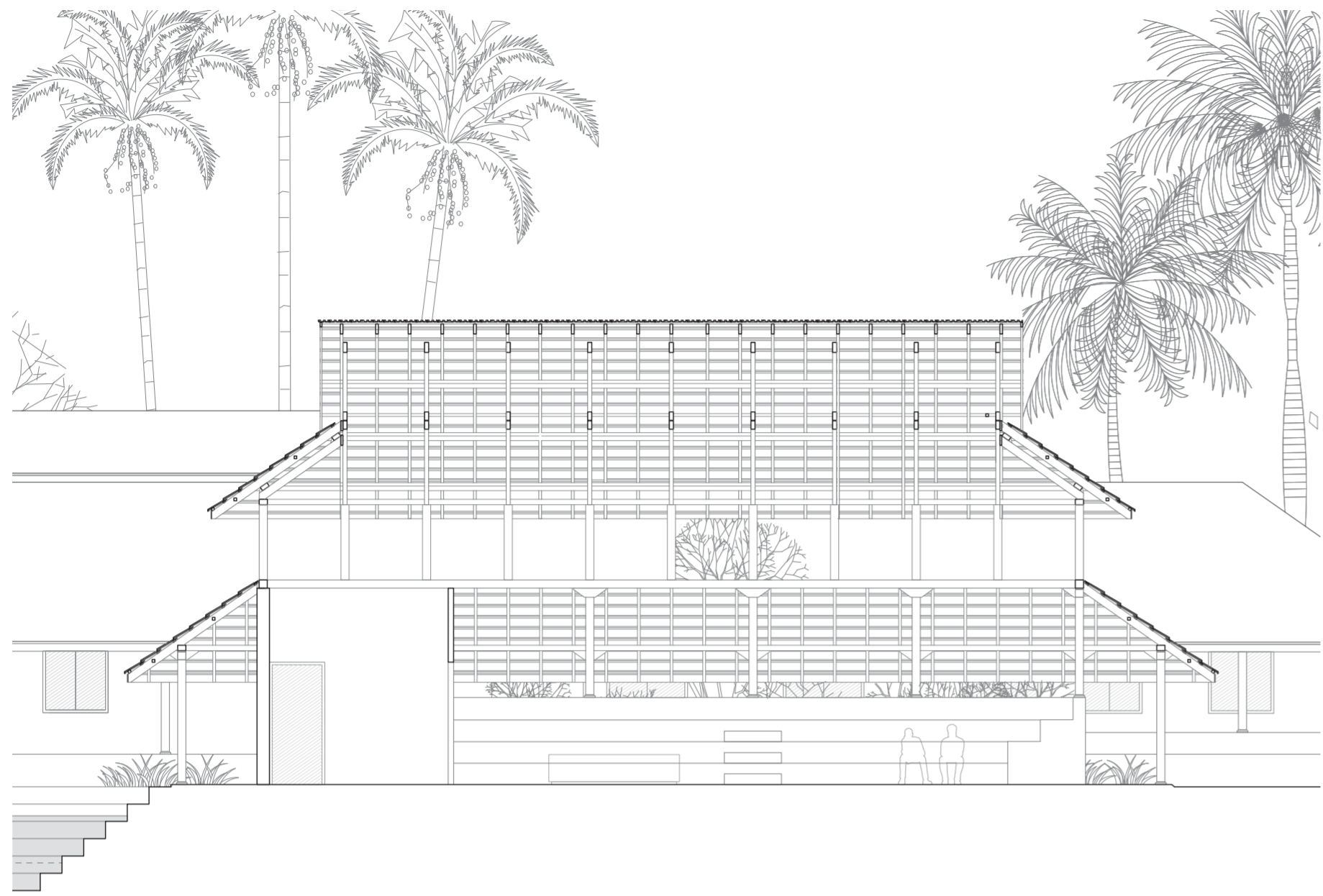
Complete roof structure with battens

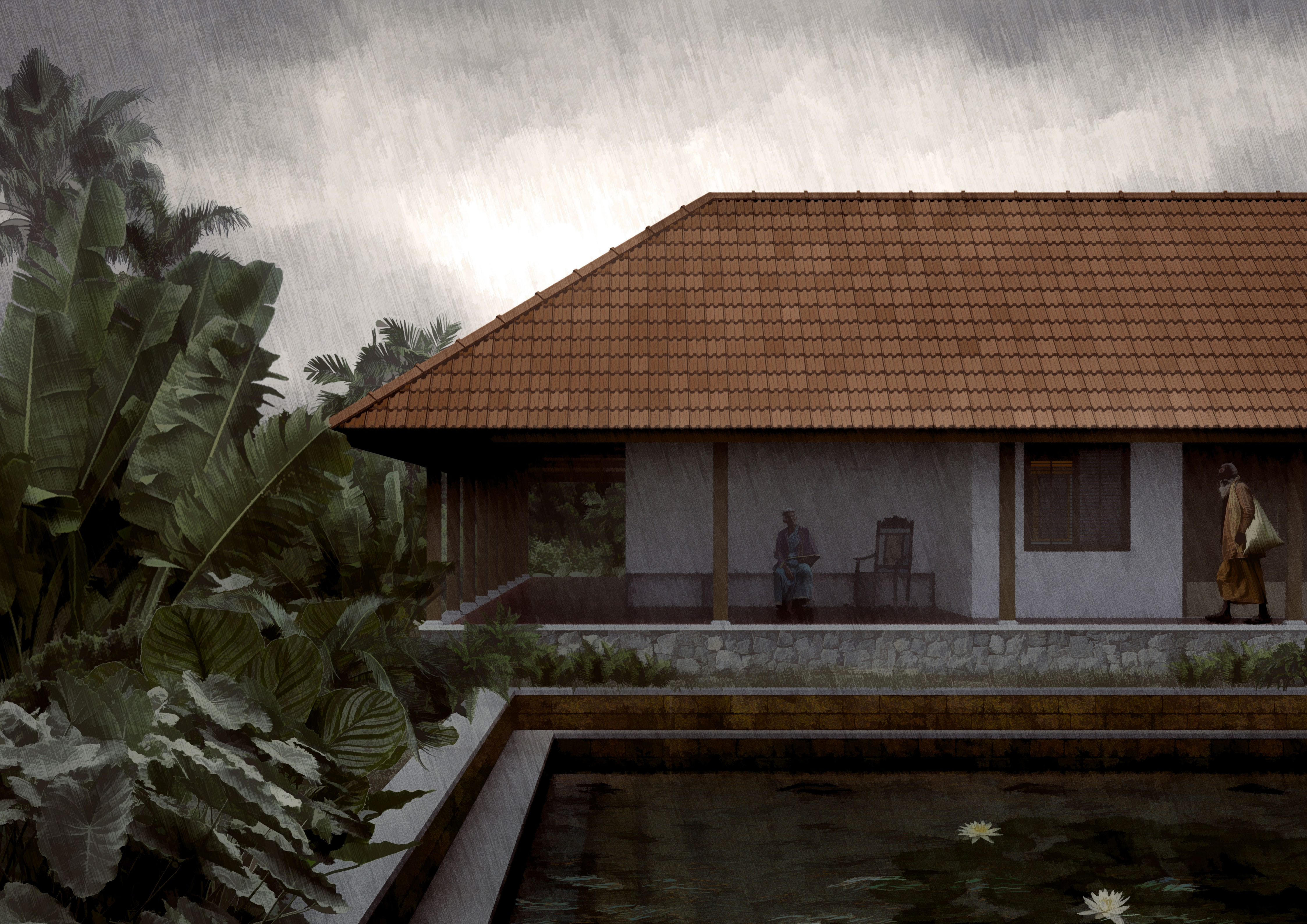


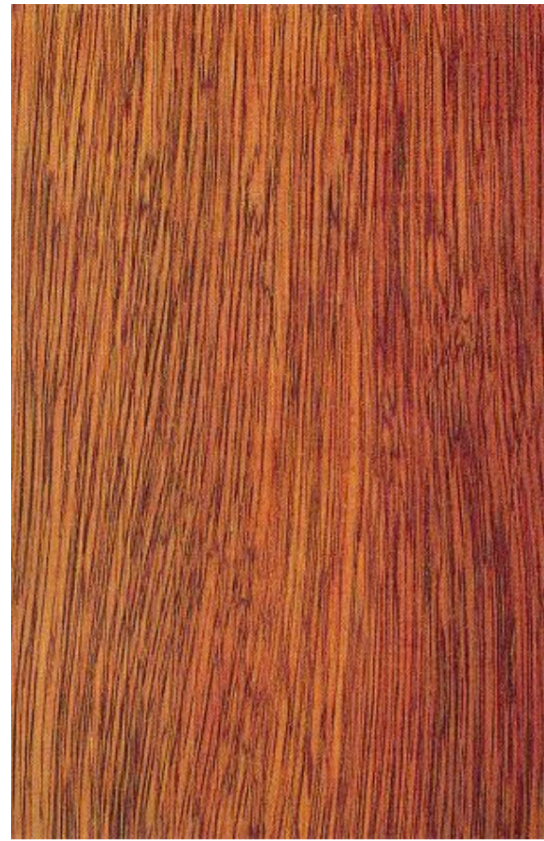
Rafters and Collar pins



Mangalore Tiles are laid







East Indian Ironwood

Binomial Nomenclature : *Mesua ferrea*

Trade Name : Mesua, Ironwood

Vernacular Name : Nanku, Churuli

Properties:

Very hard, strong and durable. It saws easily when green, but is too cross-grained to give a clean finish making it unsuitable for furniture. As the English name indicates, the wood of this tree is very heavy, hard and strong. The density is 940 to 1,195 kg/m³ (59 to 75 lb/ft³) at 15% moisture content. It is hard to saw and is mainly used for railroad ties and as structural timber. Ideal for rafters.

Uses:

The wood is more suitable for sleepers and constructional work than for furniture. It is too heavy for furniture, but for posts, beams, rafters and ordinary building work, it is excellent, being durable, even against white ants, for many years.



Jackfruit Wood

Binomial Nomenclature : *Artocarpus Integrifolia*

Trade Name : Jack wood

Vernacular Name : Plavu

Properties:

It is heavy and hard. It is durable under water and in damp conditions, however, it cracks if exposed to direct sun. White ants do not attack it. It is used for piles, platforms of wooden bridges, door and window panels.

Uses:

When freshly cut jack wood is a bright lemon yellow, but this tones down to a light brown on exposure to the air. It changes with age from orange or yellow to brown or dark red, fairly resistant to termites, fungal and bacterial decay, seasons without difficulty. Jack is well known to native carpenters as being an excellent cheap wood for general carpentry, plain furniture, and household work. It is used for piles, platforms of wooden bridges, door and window panels.



Teak Wood

Binomial Nomenclature: *Tectona grandis*

Trade Name : Malabar Teak

Vernacular Name : Thekku

Properties:

The English word teak itself comes from the Malayalam word. Highly prized, it is widely recognized as being immensely stable and has a high teak oil content that makes virtually immune to rotting, fungi and insect attacks.

Uses:

It is more expensive than Jack wood and has numerous uses including ship building (especially decks), indoor or outdoor furniture, high class joinery, flooring, panelling, plywood, decorative veneers, turnery, carving, chemical tanks and vats.



Laterite

Laterite is a soil and rock type that is rusty red and formed in hot and wet tropical areas. Laterite is quarried below the water table so that it is wet and soft and upon exposure to air it gradually hardens slowly over time

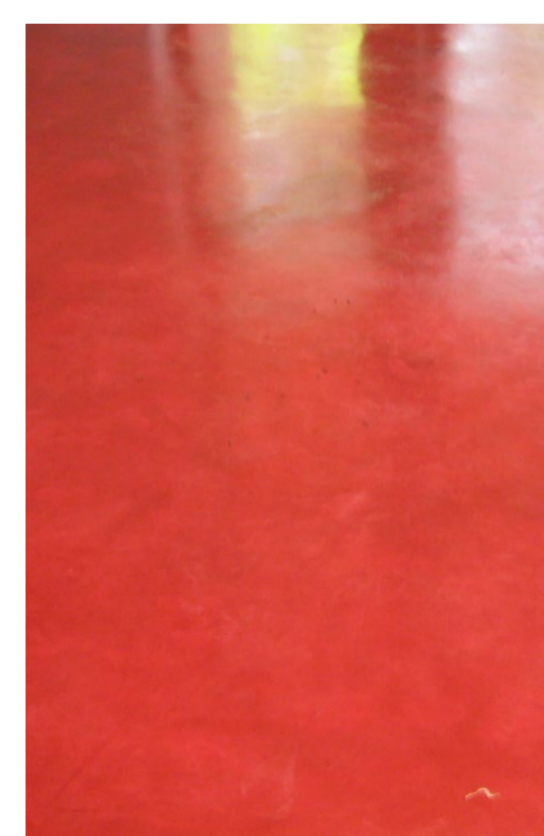
The temple complex at Ankor Wat, Cambodia is made of laterite. It is a locally available material and has been used for construction for centuries. It is cut into bricks and used as masonry. It has high water absorption capacity so suitable damp protection is needed. It is usually plastered with a lime plaster.



Terracotta Roof Tiles

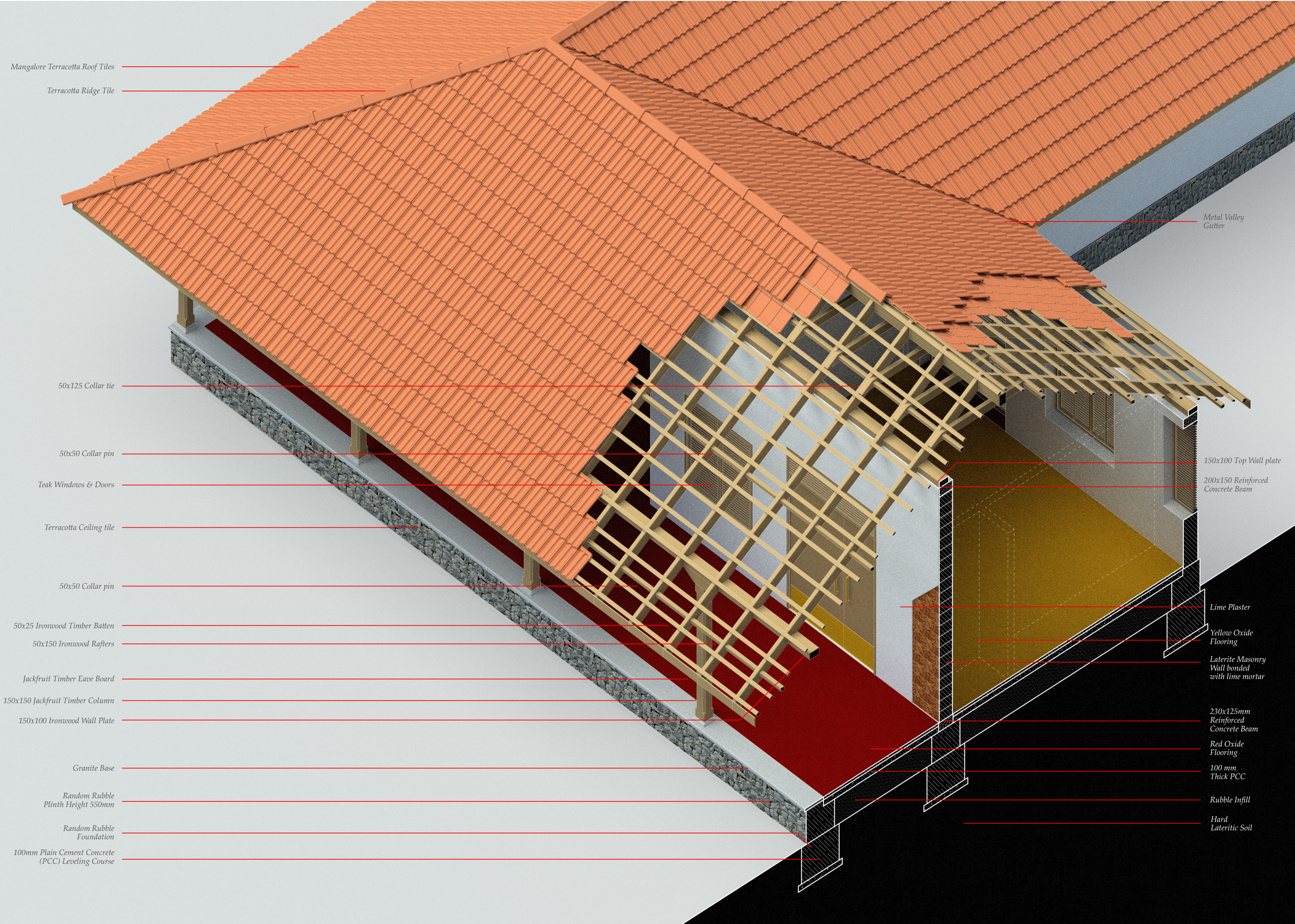
Terracotta tiles have long history in many parts of the world. The predominate type of terracotta tile used all over Kerala is called the Mangalore tile, introduced to India in 1860. There are factories all over the region that produce these tiles and they are widely reused.

They provide excellent insulation from the heat and have to be mounted at minimum angle of 30°. Additional ceiling tiles are also used in the building to provide additional insulation from the heat in living quarter.



Oxide Flooring

Oxide flooring was introduced by missionaries who arrived in Kerala over the past two centuries. Nowadays it's applied using a mix of lime, cement and oxide pigments. It provides a smooth finish that is easy to clean and maintain once it has been laid. It is usually done in one of three colours, red, yellow and black.



Mangalore Terracotta Roof Tiles

Terracotta Ridge Tile

Metal Valley Gutter

50x125 Collar tie

50x50 Collar pin

Teak Windows & Doors

Terracotta Ceiling tile

50x50 Collar pin

50x25 Ironwood Timber Batten

50x150 Ironwood Rafters

Jackfruit Timber Eave Board

150x150 Jackfruit Timber Column

150x100 Ironwood Wall Plate

Granite Base

Random Rubble Plinth Height 550mm

Random Rubble Foundation

100mm Plain Cement Concrete (PCC) Leveling Course

150x100 Top Wall plate

200x150 Reinforced Concrete Beam

Lime Plaster

Yellow Oxide Flooring

Laterite Masonry Wall bonded with lime mortar

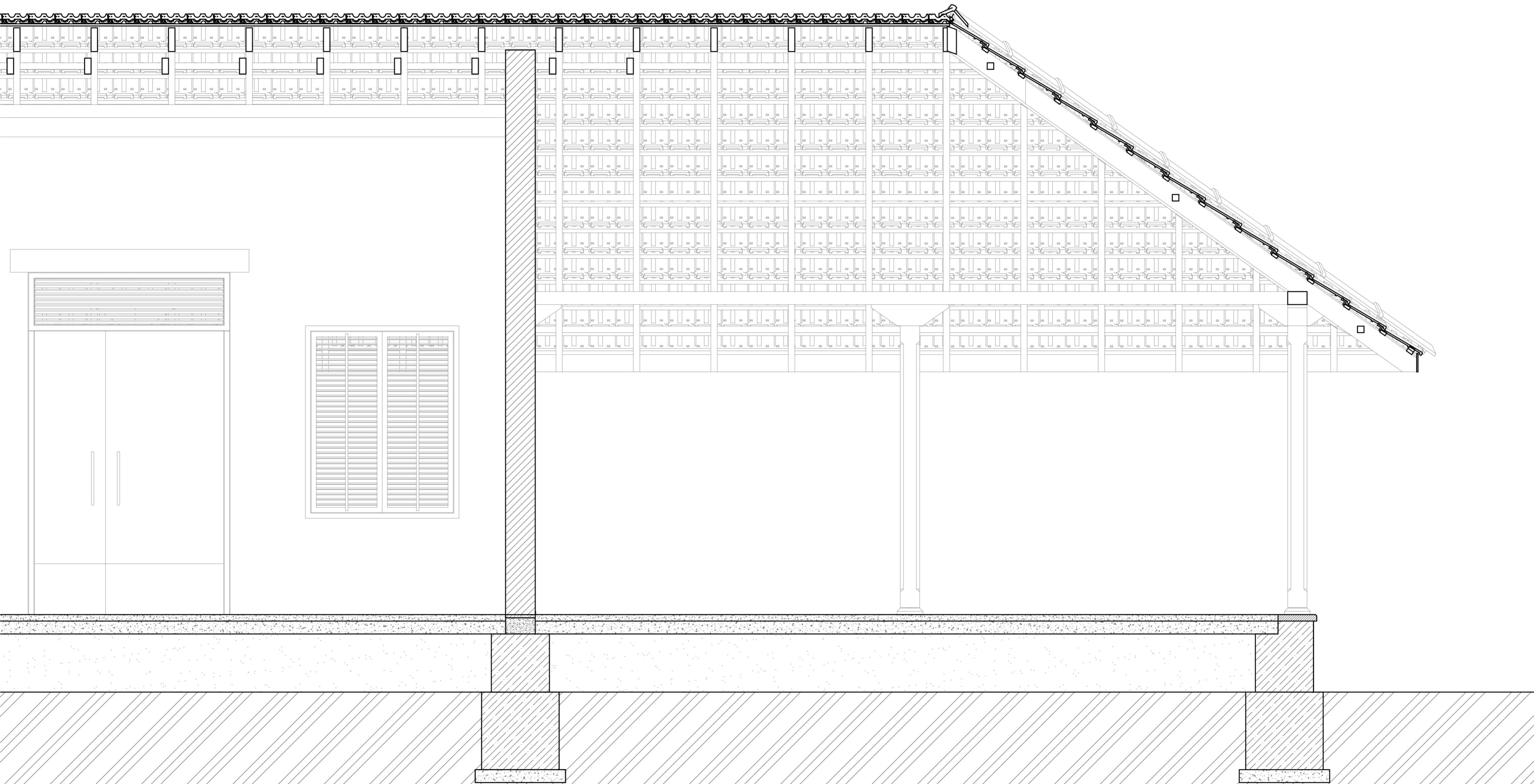
230x125mm Reinforced Concrete Beam

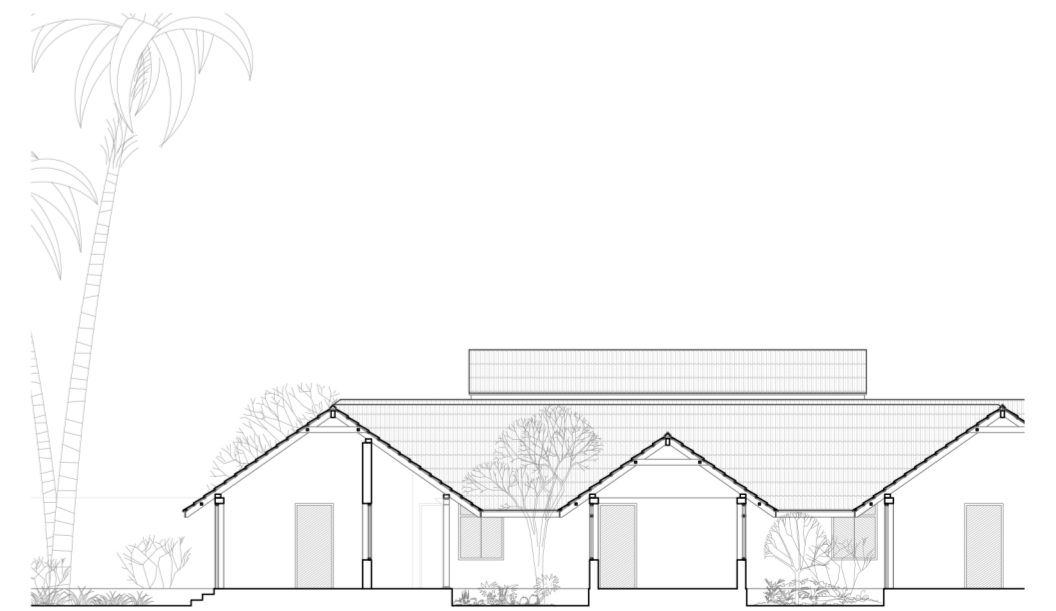
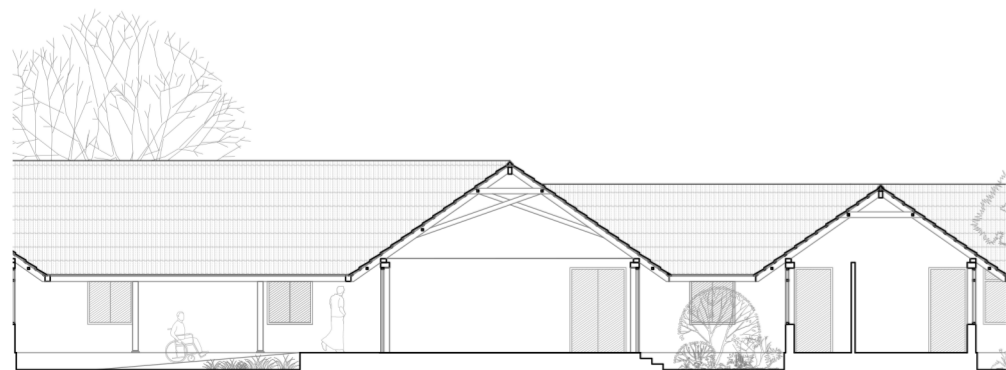
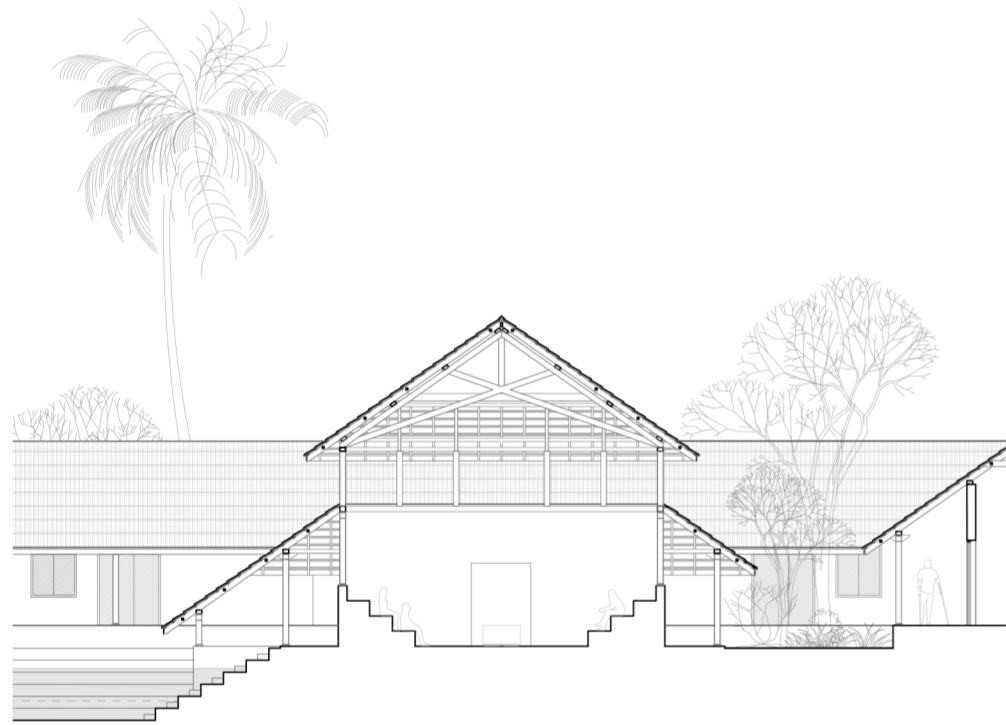
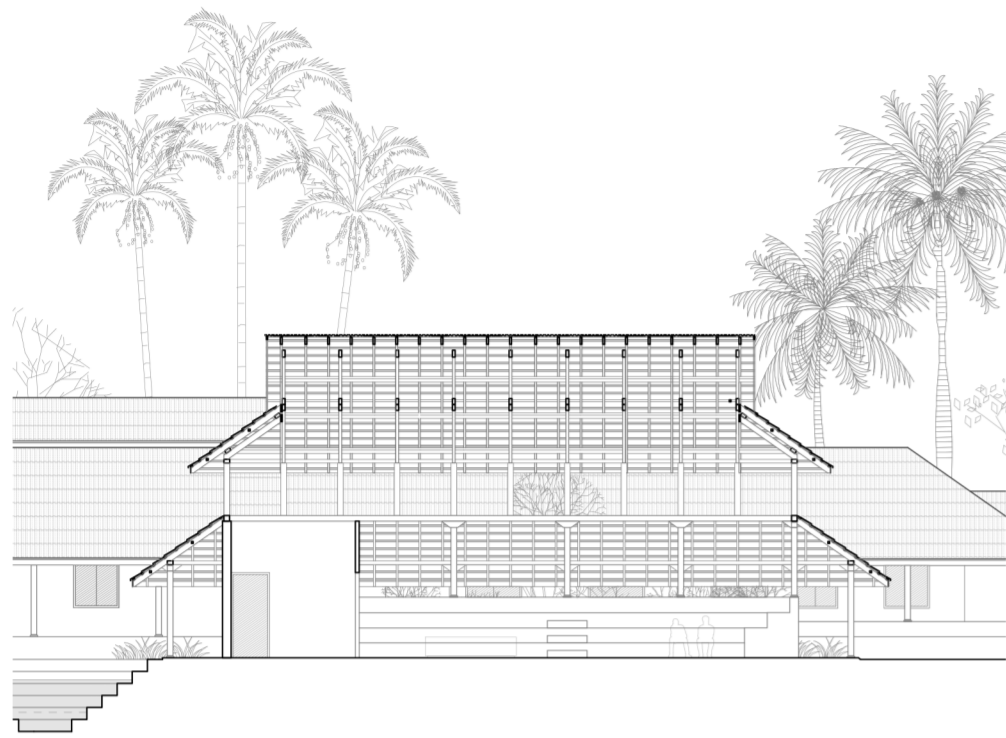
Red Oxide Flooring

100 mm Thick PCC

Rubble Infill

Hard Lateritic Soil



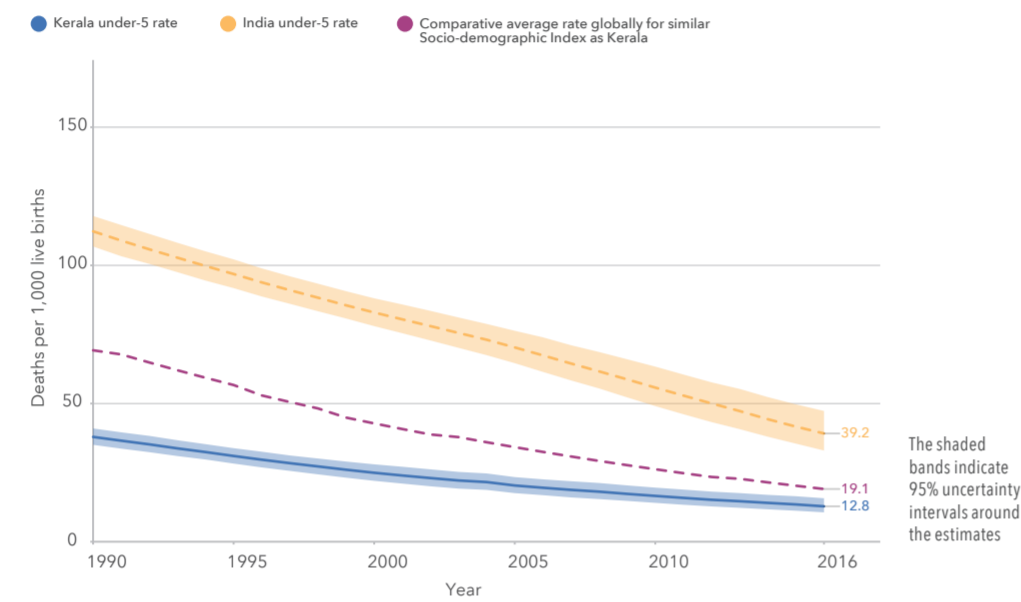


Kerala: Disease Burden Profile, 1990 to 2016

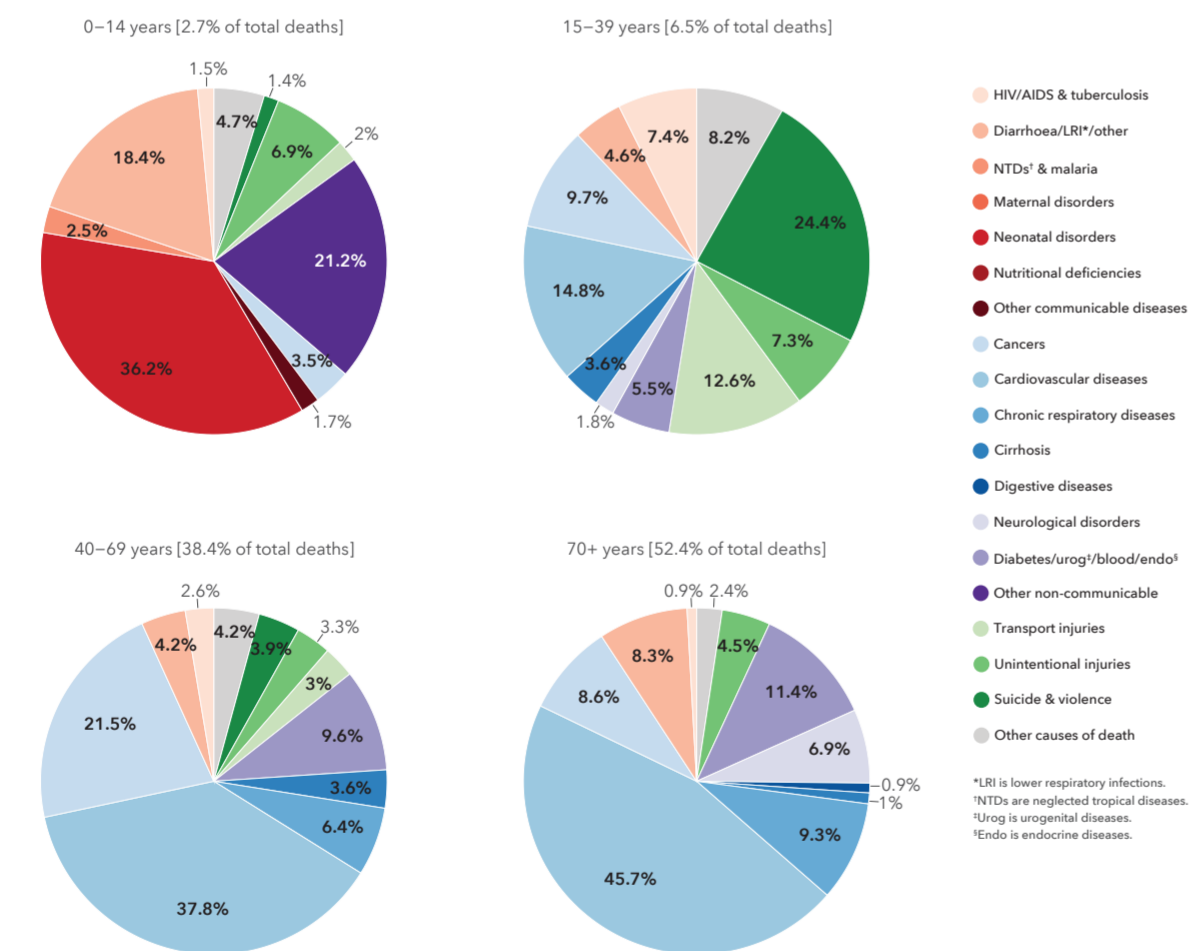
1990 life expectancy
 Females: 74.5 years Males: 67.6 years

2016 life expectancy
 Females: 78.7 years Males: 73.8 years

How much did the under-5 mortality rate change from 1990 to 2016?
 Under-5 mortality rate, both sexes combined, 1990-2016



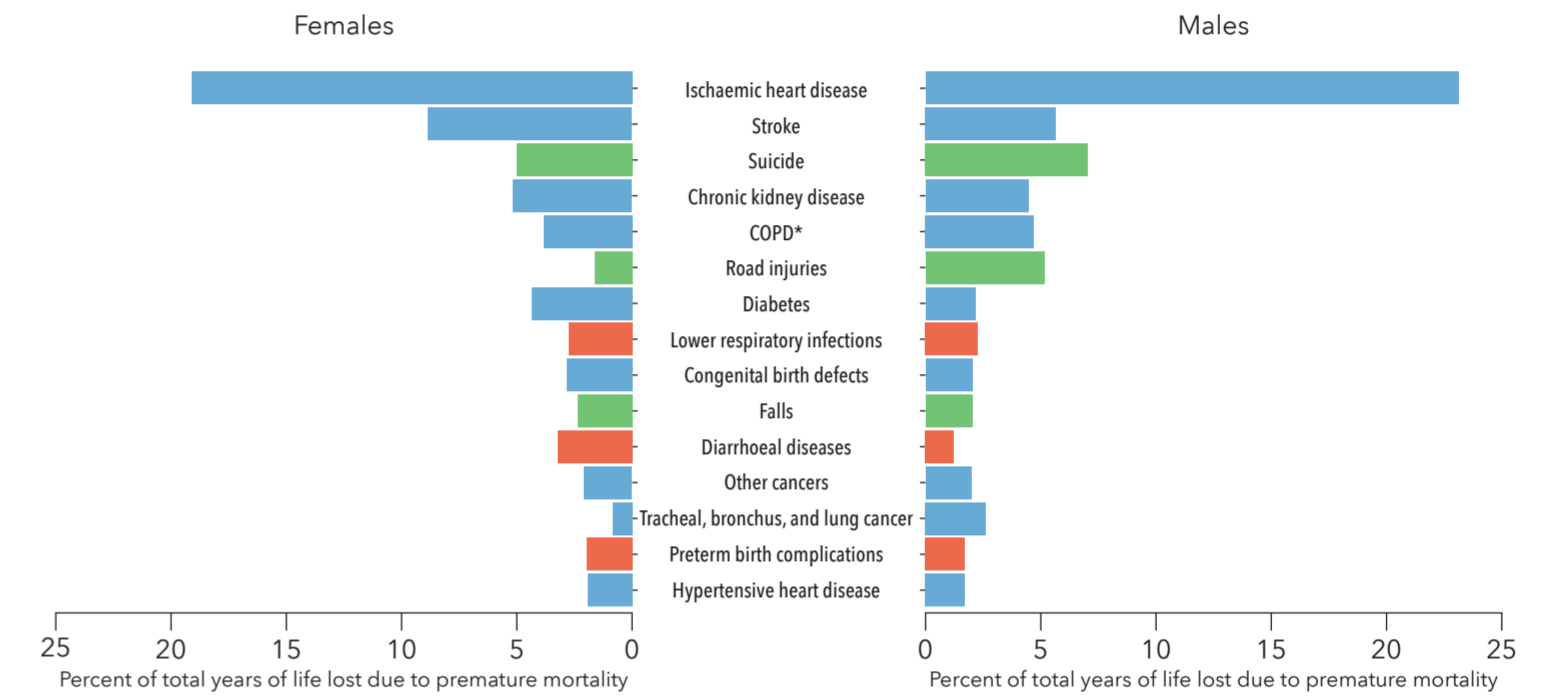
What caused the most deaths in different age groups in 2016?
 Percent contribution of top 10 causes of death by age group, both sexes, 2016



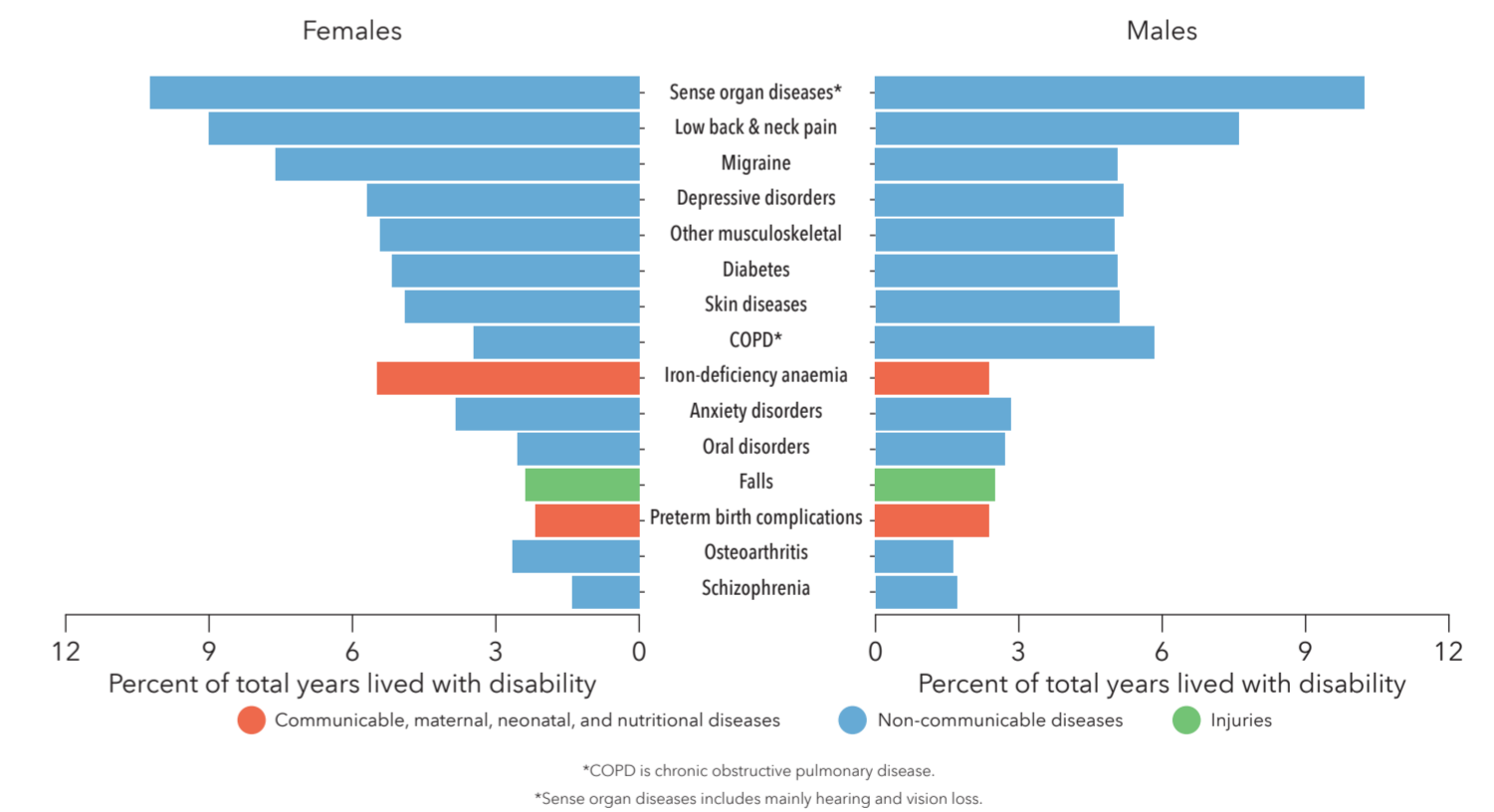
India: Health of the Nation's States – The India State-Level Disease Burden Initiative.
 New Delhi: ICMR, PHFI, and IHME; 2017. ISBN 978-0-9976462-1-4.

Proportion of total disease burden from:
 Premature death: 54.8% | Disability or morbidity: 45.2%

What caused the most years of life lost, by sex, in 2016?
 Top 15 causes of YLLs, ranked by percent for both sexes combined, 2016

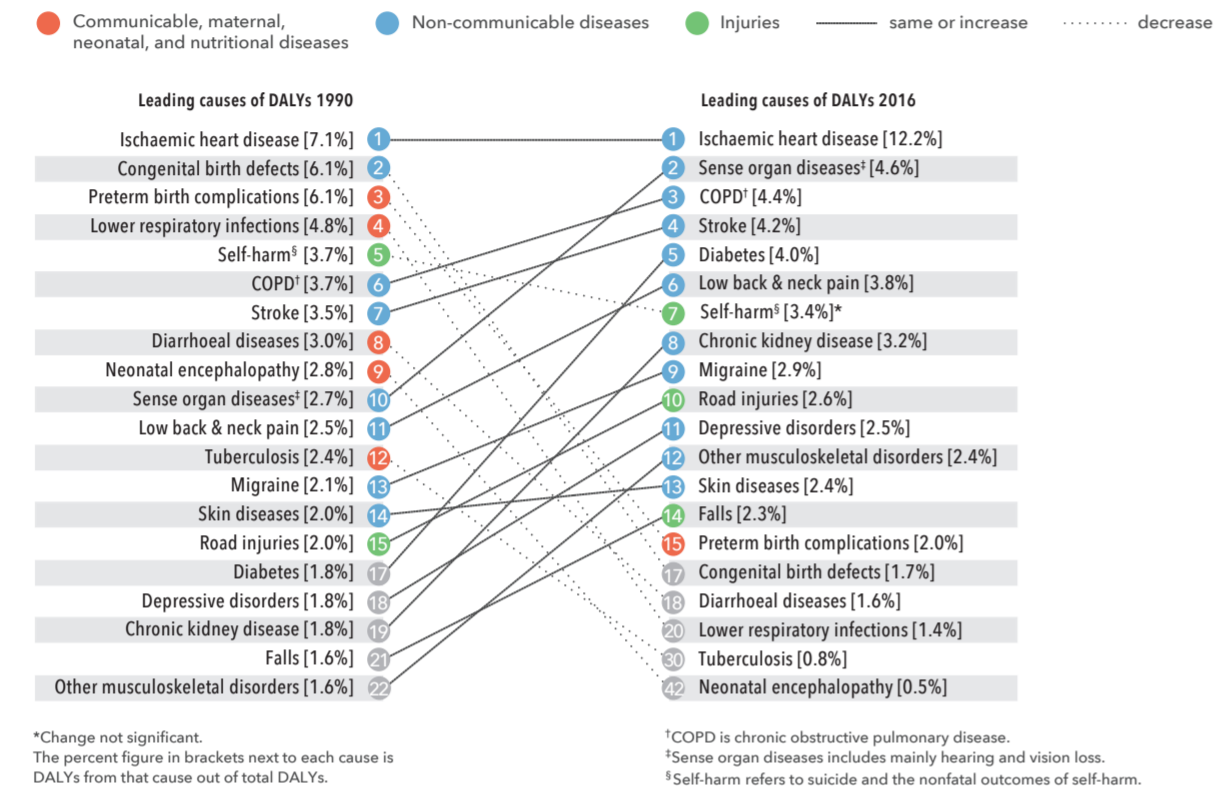


What caused the most years lived with disability, by sex, in 2016?
 Top 15 causes of YLDs, ranked by percent for both sexes combined, 2016

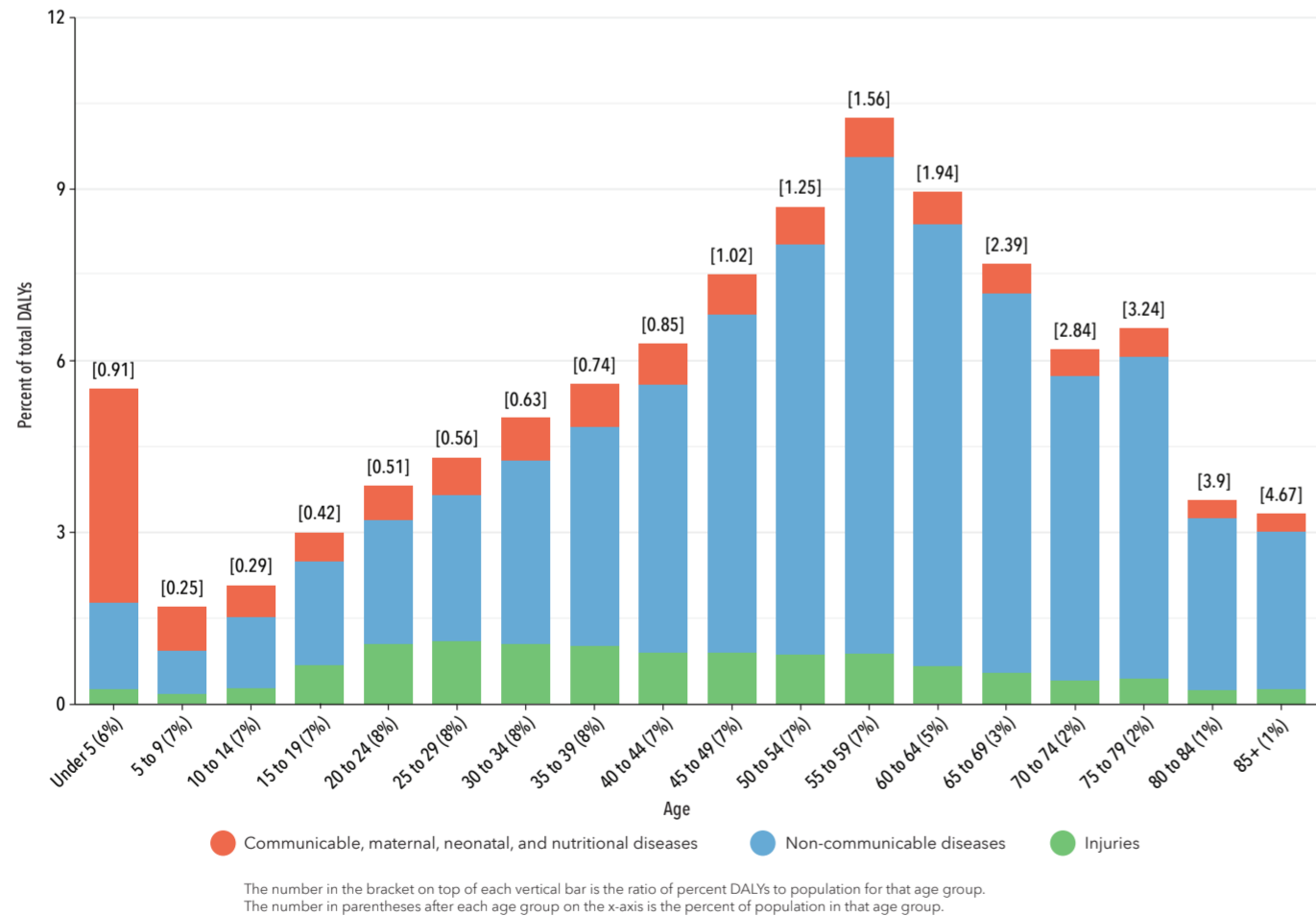


Proportion of total disease burden from:
 CMNNDs: 13.6% | NCDs: 74.6% | Injuries: 11.8%

How have the leading causes of death and disability combined changed from 1990 to 2016?
 Change in top 15 causes of DALYs, both sexes, ranked by number of DALYs, 1990-2016

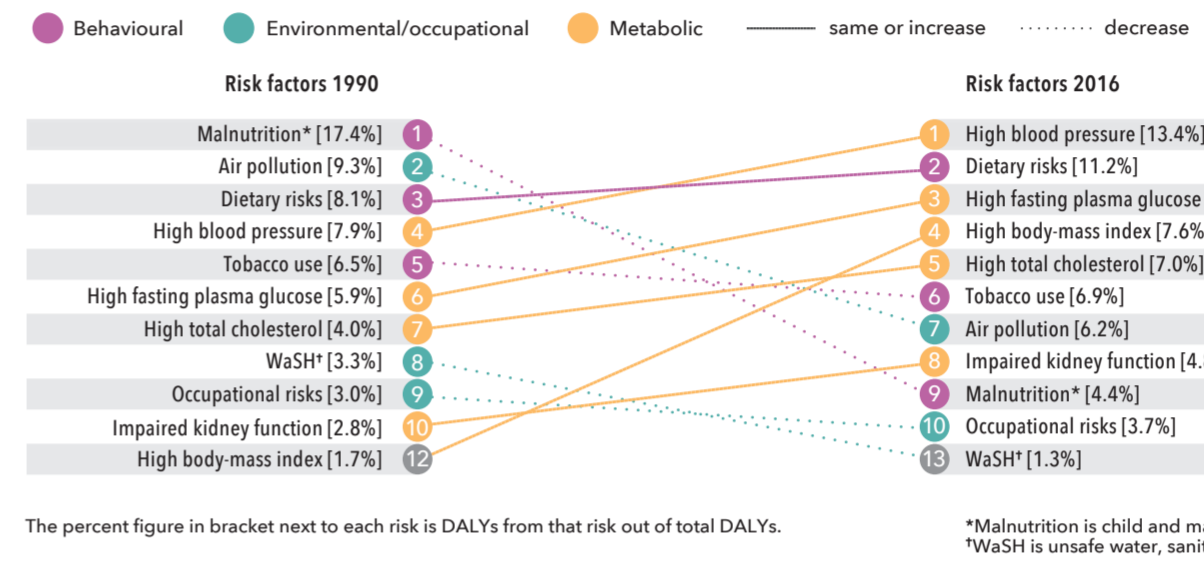


What caused the most death and disability combined across age groups in 2016?
 Percent of DALYs by age group, both sexes, 2016



What risk factors are driving the most death and disability combined?

Contribution of top 10 risks to DALYs number, both sexes, ranked by number of DALYs, 1990-2016



How did the risk factors differ by sex in 2016?

Percent of total DALYs attributable to top 10 risks, ranked by percent for both sexes combined, 2016

